University of Alberta

# Economic Restructuring, Environmental Risks, and Public Engagement at a Rural-Urban Interface

By

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Doctor of Philosophy

Department of Earth and Atmospheric Sciences

Edmonton, Alberta

Fall 2005

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**ABSTRACT**

Current research in critical humanist geography has helped to re-assert the importance of place in contemporary globalization. In contemporary research in human geography, the local has re-emerged as a research priority that engages problems associated with how a fast-paced, mobile, and globalizing world is transforming everyday life. This thesis contributes to this research area through a case study of a community that has experienced rapid social and cultural change resulting from economic restructuring over the past fifty years. This change has contributed to a local social dynamic that has put place 'up-for-grabs' in a way that involves political discourses surrounding a controversial industrial development plan. The thesis explores the local politics, discourse, and cultural setting of contested place-making among stakeholders interested in farming, rural living, and industrial development.

The study community is situated at an agricultural/industrial rural-urban interface near Edmonton, Alberta. A public consultation program commissioned between 1999 and 2001 by four municipal governments in the region attempted to gain community support for an eco-industrial plan called the *Alberta's Industrial Heartland* (AIH). The consultations were derailed when mechanisms to engage the public failed to incorporate measures to accommodate the situated and contested lifeworlds of residents who lived within and adjacent to the AIH. Residents were concerned about the potential risks associated with the AIH proposal and its implications for the viability of the area as a place to live. What is more, the public resented not being adequately consulted, even after two years of efforts by local authorities to provide open houses, workshops, and other consultations. In-depth qualitative research investigated the ensuing social conflict in

order to determine the local politics of public engagement in environmental decision-making. Within these politics, the study examined risk as the language of place-making the structure of which centred on culturally-mediated place attachment and risk amplification. Finally, the thesis contributes to the body of research that defines the local cultural impacts of global economic restructuring. Taken together, the chapters in the thesis paint a picture of a politicized struggle over place-making situated in a network of power between global forces and local process. From a practical perspective, this thesis informs efforts to improve policy formation by clarifying the role and responsibilities of local governments toward improved environmental management.

**ACKNOWLEDGEMENTS**

This thesis is only one product of the learning process that has taken place over the last four years of academic work and life. Several people have contributed to my intellectual development and the research outputs contained in the present work.

First, to the participants of the study, especially members of the community advisory committee. You gave me access to your personal lives and struggles, the result of which has likely served my interests more than it will ever benefit you. I only hope that my research contributes in some small way to improve the local relations and policy outcomes for the region.

To Theresa Garvin, and the rest of my supervisory committee. As your first doctoral student, I hope that my time under your guidance sets a good example for your future students. Four years of academic supervision is not only a part of your work, but is a life commitment. I owe you a debt of gratitude for your expert guidance in taking me through these first steps to becoming an accomplished professional geographer.

To my family and friends. Without your support and encouragement I would have never come close to undertaking such a monumental challenge. In particular I wish to thank my student colleagues from the Human Geography Society (HuGS) – Josh Evans, Heather Castleden, and Jody Mackenzie. Together we have shared the first steps of a collaborative journey that will continue for years to come. I am also very grateful to my project assistant and friend, Leah Gold, as well as my library contact and friend, Leah Vanderjagt for their help.

Finally, this research was supported by a small grant awarded by the Canadian Agricultural Rural Communities Initiative of Agriculture and Agri-food Canada. Products of the research related to this grant can be found in Appendix I. I am also thankful for financial support from the Department of Earth and Atmospheric Sciences, the Social Sciences and Humanities Research Council (Doctoral Fellowship), the Univer[illegible]f Alberta (Walter H. Johns Award), and the City of Edmonton (Graduate Fellowship).

Jeff Masuda

2005

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# Chapter 1.

## INTRODUCTION

The goal of this thesis is to investigate the local dimensions of economic restructuring at an agricultural/industrial rural-urban interface (hereinafter referred to as the interface). Economic restructuring refers to a process of change encompassing contemporary social, political, and economic transformation, most often associated with globalization (Nelson, 2002). At the local level, such change can be evident in people's lifeworlds[1] as they participate in everyday community life. Associated with globalization, economic restructuring can thus be interpreted as a locally enacted phenomenon that involves re-negotiations of taken-for-granted experiences of home, work, and community in an environment of change. The interface is at once the site of particularly rapid and turbulent socioeconomic transition as well as profound cultural change that ranges across agricultural preservation, business development, residential in-migration, industrial operations and ecological sustainability (Walker, 1995; Tacoli, 1998). Such changes revolve around evolving land uses that centre on contested ideas over the direction and pace of development. Land use policies developed to reconcile these conflicts have led to public debates and struggles over what a place 'ought' to be (Walker, 1995; Baxter, Eyles, and Elliott, 1999a, 1999b).

The chapters in this thesis explore the local enactment of place-making in the context of petrochemical industrial development in Alberta, Canada. Since the 1950s, the rural 'sense of place' in Alberta has undergone a profound transformation corresponding to a shift from a predominantly agricultural economy to one that is based largely on the oil and gas sector (Friesen, 1987; Hay and Basran, 1992). Within a provincial political and economic framework of resource exploration and production *en masse*, rural communities in Alberta have been forced to adapt to agricultural decline, rapid urbanization, and oil and gas siting and processing facilities, all of which are associated with economic restructuring in a globalized fossil fuel based industrial economy. Making sense of these changes from a community perspective can benefit from a place sensitive approach to understanding the situated social, cultural, economic, and political dimensions of change.

### 1.1 Theoretical context

To approach community-level restructuring, this thesis finds its conceptual grounding in critical humanist conceptions of place. Since the 1980s, renewed interest from social and cultural geography in locality studies (Agnew, 1987; Cooke, 1989; Entrikin, 1991; Massey, 1991) has introduced a new critical perspective to a postmodern place discourse developed since the 1970s (Tuan, 1974; Relph, 1976). With the cultural turn in geography in the late 1980s, a groundswell of new theory-building has sought to

[1] The culturally defined and taken-for-granted mundane experiences of daily life as carried out in particular spatio-temporal settings (Buttimer, 1976; Dyck, 1995)

determine how postmodernity has brought about new forms of cultural identity in contemporary society and how these are constituted in place (Harvey, 1996, Massey, 1997; Cresswell, 2004). A shift from the early humanist focus on Heideggarian 'essences' that sought a universalizing agenda for place (Tuan, 1974, Relph, 1976), the critical humanist approach sees place as a 'multiplicity' of processes, structures, and histories (Addams, Hoelscher, and Till, 2001). In other words, place is not just a unique, and pre-given object to be studied, or a 'locus of meaning'. Place is always *becoming*. It is fluid and dynamic, changing over the course of time; place is continually being 'made' (Martin, 2003).

Following these insights, geographers have debated extensively on the implications of modern global capitalism for place-bound identity (Harvey, 1989, 1996; May 1996; Massey, 1997). Some have reflected on the global homogenization of culture and the current state of 'placelessness' it produces (Harvey, 1989; Kunstler, 1994). In this view, localities have opened up (some say 'sold out') to the influences of the global marketplace, leading to the breakdown of the local particularity of places that were once comprised of cohesive, culturally bound communities. In this view, such communities have been replaced by an age of geographic fragmentation, postmodern disorder, and social individualization (Beck, 1992). Place, in this world, is a reactionary process of shutting out the external world that is only accessible by those with sufficient social or economic capital to do so (Harvey, 1989). However, more recent work has questioned these romanticized assumptions that place and community are co-terminous, arguing for a more nuanced approach to understanding the relationship between the local and the global (Massey, 1997, 2004; Casey, 1998). These scholars are reasserting a more progressive view of place that has as its basis an outward focus on the meaning of the local within the broader operation of contemporary global society. Through the 1990s, a global sense of place has situated local identities within a global network of flows and interconnections of modern communications, transportation, and international capitalism all "weaving together at a particular locus" (Massey, 1997; p. 322). To Massey, each place is a particular constellation of social relations that come together from both 'inside' and 'outside' to create a unique sense of place. In this sense, a new basis for place-making at the local level arises out of the material and imagined places that people construct from their own past and present life experiences (Casey, 1987; McDowell, 1997).

It is at this point that power becomes important to the local dynamics of place-making. Importantly, people within a particular locality inevitably have different memories of the past, experiences of the present, and ambitions for the future (Casey, 1987). Place is therefore a *contested* multiplicity where different actors may vie for control over the local place-making agenda. The network of relations that constitute local place-making struggles have a built in power geometry - who controls the movement and flow of culture and capital determines the character of a particular place (Massey 1997). At the root of this power geometry are ideological conflicts between groups with conflicting interests and priorities (Cresswell, 1996). In this sense, this thesis makes it clear that place struggle occurs between those vested with power and those who wish to take power, and that this struggle can take place both within and outside fo formal

political processes. By focusing on the interface, the research shows that ideologies are nested in-between those who propagate the current form of economic development in global society and others who are concerned about preserving or sustaining more locally situated cultural practices.

In sum, the cultural turn in geography has opened up new ways of looking at place and social life. Rather than simply asserting that 'place matters', a progressive view of place can be used as a lens for analysis to understand the increasingly complex nature of social interaction and cultural practice (Cresswell, 2004). If place can help to identify the origin and influence of internal and external factors on local social life, then our understanding of economic restructuring and cultural change will improve. However, as Martin (2003) points out, "our theoretical tools for demonstrating where and how place is deployed in polities are still being developed" (p. 731). There is an opportunity to uncover the mechanics of social dynamics underlying locally situated and contested meanings and representations involved in place-making. Recent work that operationalizes place as an analytical concept ranges across urban gentrification (Reid and Smith, 1993), early 20$^{th}$ century immigrant housing (Hayden, 1995), and indigenous rainforest communities (Escobar, 2001). The thesis extends this line of work into the domain of place-making in local environmental controversies around petrochemical globalization. A case study of the *Alberta's Industrial Heartland* (AIH) provides the setting for research that explored local activism around a proposed inter-municipal industrial development plan. The plan represented a process of institutionalized, but contested, place-making in the wake of the global demand for oil and situated in the resource-rich province of Alberta and the local context of downstream petrochemical processing. The three substantive chapters (Chapters 2, 3, and 4) deal with three aspects of place-making in the context of local economic development at a rural-urban interface situated in central Alberta. Chapters 2 and 3 focus on applications of place-making in the domains of public engagement and risk communication. Chapter 4 takes a more integrative view of the case study to examine the process of economic restructuring and its implications for community cultural change in the AIH.

## 1.2 Methodological context

The cultural turn in geography has generated new ways of approaching the research subject of place. Concerned with the interpretation of meaning, geographers have embraced qualitative methods to access the lived and situated realities of everyday experience in-place. An ontology that emphasizes the subjective nature of reality underpins a view of place that is constituted through culturally relative social interaction. Epistemologically, in-depth and contextual methods are employed to understand a world full of meaning that can be 'read' and interpreted as text (Hoggart, Lees, and Davies, 2002). As this meaning is socially constructed, such methods range across discourse analysis, ethnography (Cresswell, 2004), and in-depth interviewing (Hay, 2000) that provide first-hand accounts of experience as it is lived 'on the ground' (Baxter and Eyles, 1999).

The case study approach employed in this thesis provides an analytical vehicle within which to pose specific research questions relating to place and its role in local politics, discourse, and cultural change. Case studies encompass a wide range of research designs that contain specific methods applicable to the particular research question at-hand (Yin, 1994). Case studies can occur at any scale, ranging from the individual, to the local (e.g. neighbourhood, community), to the national or international (e.g. nation states, international organizations). The scale for a particular research question is determined by both the focus of the analysis and logistical considerations (Yin, 1994). This study defines the AIH as its case study in the sense that it represents a 'boundary' around which meaning can be drawn by local residents and authorities in the context of future industrial development. In other words, the AIH has a specific (but contested) locus of meaning relating to formal plans for industrial development, and the reaction to those plans by a range of perspectives from within the locality. Although a physical boundary does exist within local planning documents (AIHA, 2002), the boundary that delineates the case study only exists as a heuristic device. Inclusion criteria for this case study are based only on 'who knows' and 'who is interested'.

This case study utilized a mixed-method data collection approach. The fieldwork took place between December, 2002 and January, 2004, beginning with a series of initial meetings with key informants from local government, media, and the public. Prior to the start of data collection, letters of support from several local and provincial agricultural and industrial organizations and citizens groups helped to secure project funding from the Canadian Agricultural Rural Communities Initiative of Agriculture and Agri-food Canada. A community advisory committee established with representatives from these groups provided opportunities for stakeholders to remain attuned to, and provide advice on, the project as it unfolded. This committee met face-to-face three times over the course of the project, and regularly via telephone and email. These meetings provided an outlet to discuss research findings with people who had experience and knowledge 'on the ground'. Once the project objectives were agreed upon, data collection took place over the next year, consisting of document reviews, two rounds of individual in-depth interviews, and a final group interview.

Chapters 2, 3, and 4 each contain a methods section that explains in detail the specific tools employed within each analysis. Chapter 2 employs both the document analysis and interviews to re-trace the timeline and local perspectives related to the AIH public consultation program. Chapters 3 and 4 rely mainly on the qualitative interview data to explore the more theoretically driven dimensions of risk communication and global economic restructuring. Appendices C through H contain details of the specific data collection tools employed in the overall project.

## 1.3 The Alberta's Industrial Heartland

On May 27th, 1998, at an invitation-only launch party in Sherwood Park, Alberta, the municipalities of Strathcona, Lamont, Sturgeon, and Fort Saskatchewan together announced the creation of the *Alberta's Industrial Heartland* (AIH). The AIH was a joint project designed to plan for and promote industrial development in a region intersecting

all four municipalities (Map 1, Appendix A). Already one of the largest petrochemical processing centres in North America, current industrial activity in the region represents over $11 billion in investment (AIHA, 2002). To lead this project, the *Alberta's Industrial Heartland Association* (AIHA, or the 'Association') was established "to develop and promote the Heartland region as a global leader in processing, manufacturing and eco-industrial development" (AIHA, 2002; p.2). The rationale behind the creation of the AIH came from several biophysical, sociodemographic, and economic features of the region (AIHA, 2002). Figure 1.1 depicts the front-page information from the official website that advertises the AIH to the international business community. The website sets a place-making agenda emphasizing that the region boasts the second largest natural gas liquids storage capacity in the world within immense subsurface salt caverns. Also advertised, the region is immediately south of oil and gas resources in Northern Alberta, providing it with low-cost petrochemical feedstock. Finally, promoters linked the industrial potential of the region to several biophysical and infrastructural advantages. These include an abundant water supply through the North Saskatchewan River along with existing pipeline, rail and road transportation, an educated workforce, and proximity to a major city (Edmonton). Together, these factors put the AIH at a very favourable geographic location between resources to the north and markets to the south.

The rationale behind the AIH came from the Alberta Municipal Government Act (Government of Alberta, 1994) and a new approach to land use planning in the province. The Act paved the way for local governments to develop coordinated strategies for land use and economic development through the amendment of individual Area Structure Plans (ASPs), Municipal Development Plans (MDPs), and land use bylaws (together referred to as the AIH proposal). In the case study region, four municipalities who each shared some stake in the region's industrial economy came together to develop complementary area structure plans that would coordinate the economic development plans and prepare the way for future industrial growth. As part of the process, the Act stipulated public hearings be held before local elected officials to provide citizens the opportunity for input. Leading up to the public hearings, local authorities hired an environmental consulting firm to oversee a public consultation program intended to introduce local residents to the planning process and provide them with some opportunity for comment and feedback. The original timeframe for the consultation program was to last less than a year starting in November, 1999 and running to May, 2000. However, as one indictment by a local reporter reveals (Figure 1.2), this entire period was wrought with considerable local controversy that has since lasted long after the AIH proposal was approved in August, 2001. Increasing concern among citizens as the program unfolded resulted in a protracted strategy to appease the public. Despite these efforts, criticism of the AIH continues, as revealed by ongoing newspaper coverage of the public consultation program.

Part of the difficulty in consulting with the public had to do with the complicated social and cultural scene of the residential community in the study area. For example, relations between farmers who were firmly established in the region over the past 100 years and non-farmers moving into rural subdivisions and acreages created the conditions for an internal conflict over farming practices and residential lifestyle. Figure 1.3

highlights a poetic perspective of one farming woman in the area who had tentative views about these new rural colonizers. Ultimately, these internal conflicts play an important role in the place-making debates within the public consultation program.

## 1.4 Structure of the thesis

The thesis is structured around controversy over agricultural and environmental sustainability, residential living, and regional economic development surrounding the creation of the AIH. A social constructionist approach identifies land use decision-making as a venue for a local social and cultural struggle between authorities and residents. The prospect of industrial development created conditions for debate over who benefits in the community and who takes on the environmental, health, and economic costs. Figure 1.4 provides a conceptual framework that positions each chapter within the overall research project.

This introduction has provided the theoretical and methodological parameters of the study, by introducing concepts of place and power in locally contested economic restructuring. This background weaves together three substantive papers (Chapters 2, 3, and 4), each of which draw on aspects of place theory to inform the case study analysis and understand the controversial place-making surrounding the AIH proposal.

Chapter 2 focuses on the local politics of place-making. It examines public engagement as the formal enactment of place-making in local context. Through a document and interview analysis, the chapter reviews the AIH public consultation program implemented between 1999 and 2001. By reflecting on the local dimensions of the controversial consultation program, the chapter reveals ways in which power inequities built into contested place-making processes can influence the design, implementation, and outcomes of local environmental decision-making.

Chapter 3 focuses in on the discourse within local politics by introducing risk as one language of place-making. Using the Social Amplification of Risk Framework (SARF) (Kasperson, *et al,* 1988; Pidgeon, Kasperson, and Slovic, 2003) it examines the role of place attachments in the formation and amplification of risks as part of the public debate surrounding the AIH plans. The relationship between locally situated place attachments and risk perception represents a cultural contribution to the SARF framework.

Chapter 4 takes a broader view of globalizing place. It identifies the rural-urban interface as the cultural setting of place-making. Here, place-making is treated as a historically and spatially contingent process. Through an examination of the local cultural dimensions of long-term economic restructuring, this chapter helps to identify how the interface is 'up for grabs' in terms of the place-making agendas arising from competing agricultural, residential, and industrial interests by providing a local 'voice' within broader discussions of economic restructuring.

Chapter 5 concludes the thesis through a synthesis of the three papers, their collective contribution and limitations, as well as areas for future work in this area.

***Local municipalities cooperate to plan safe, environmentally sound and productive industrial area***

In September 1999, the four Heartland municipal partners, Strathcona County, City of Fort Saskatchewan, Sturgeon County and Lamont County, in consultation with consultants, undertook the challenge to ensure future growth in the region occurred in a coordinated and responsible manner. Input is actively being solicited from residents, industry and business into the development of Complementary Area Structure Plans (CASP).

There are several reasons why we've become Canada's largest processing centre. Besides the exceptional business-friendly investment environment, the Heartland region has the most sought after natural resources including the second largest NGL storage in the world, the best educated and most productive workforce in Canada, and a reliable source of feedstocks at competitive prices.

Alberta's Industrial Heartland region is over 48,000 acres (194 square kilometres or about 75 square miles) in size, and is located within Metro Edmonton, Alberta's Capital Region.
The Heartland is adjacent to a major city, yet the peace and beauty of the country, along with every conceivable recreational pastime, are all just a short drive away. The Heartland is surrounded by rolling prairies and many small communities. This diversity allows for a choice of lifestyle envied by many.

Now considering all the numerous other benefits of Alberta's Industrial Heartland, how could any large and mid-size manufacturing industry looking to find the most advantageous location in North America resist?

Source: Alberta's Industrial Heartland Association website (http://industrialheartland.com)

**Fig. 1.1. Official 'talk' of the Alberta's Industrial Heartland.**

***Heartland a failure***

I'm sure many local government officials are quite happy with Alberta's Industrial Heartland. Formed in 1999, it is a sales office established by the City of Fort Saskatchewan and Strathcona, Sturgeon and Lamont counties charged with bringing more industry to our area.

It appears to have had some success in attracting new industry, although it is difficult yet to say just how big that impact has been.

But I believe Alberta's Industrial Heartland will soon lose business for the region, if it hasn't done so already.

Alberta's Industrial Heartland has not been able to address the problem of balancing industrial growth with environmental and social concerns. Its regional plan merely tries to hide the problem with a little paint. Maps which had shown many small pockets of homes and farmland were redrawn to show nice, neat, industrial zones.

The only problem is that the people living in these zones didn't disappear. And now they're mad.
Recent hearings into Agrium's Redwater fertilizer facility showed that these angry people are learning how to fight, using the system to pay for lawyers and experts to testify against industrial growth.
Any new industrial project therefore faces a tough and costly fight at best. This is bound to discourage projects.

Local government must face this fact, and deal with the problems fairly. This will require a new regional plan and new willingness to listen to those hurt by development.

Disbanding Alberta's Industrial Heartland would be a good first step.

Source: SCP Editorial (2004)

**Fig. 1.2. Newspaper editorial showing an example of critical media coverage of the AIH.**

**Friends or Foe**

A ride in the country on a summer day
Was a joy to the urban folk, so they say.
The calves were romping, the deer at play,
The geese were looking for a place to lay,
Do you think that the farm folk would care,
Or do you think they'd be willing to share?
It would just be an acre or three
Where the animals roam and the birds fly free.

So beside a farm they built their dream,
without a thought or so it would seem,
to what everyday life would be like,
or was it just a place to hike?
The deer that were there are no longer around
for a quieter place I'm sure they have found.
The calf has now grown to a cow – what a fright
That cow pie sure stinks across the fence to the right!

The whole darn scene doesn't seem right
Birds that were there have now taken flight.
The water is scarce – no longer a lake,
The geese that were there a nest will not make.
The drought is a problem we can't run from,
It affects us all when the rain doesn't come
The farmer is trying a living to make,
so quit your complaining for goodness sake.

For the urban folk a suggestion I make,
open both eyes for your own sake.
Look around before that move you make,
country living is not a piece of cake.
So beside a farm you choose to live,
the odours here, you have to forgive.
For we've been here a very long time,
Working the earth trying to make a dime.

So come and join us, the life is great,
but quit your grumping at our gate.
The deer and the birds now stay away,
because the people, have come to stay.
The cow, the birds friend is the next to go.
On waste land they eat the growth down low,
so the young plants have a chance to grow,
and the weed seeds don't get a chance to blow.

On rural roads the farmer must go,
His grain and hay fields he must mow.
It may seem to you he goes much too slow,
with his large machinery in tow.
So be patient as to work you go
A living you too have to make we know.
So let's get along, it's easier that way
for friends and neighbours we'd like to stay.

Source: Kampjes (2003)

**Fig. 1.3. Local poetry depicting farmer – non-farmer relations.**

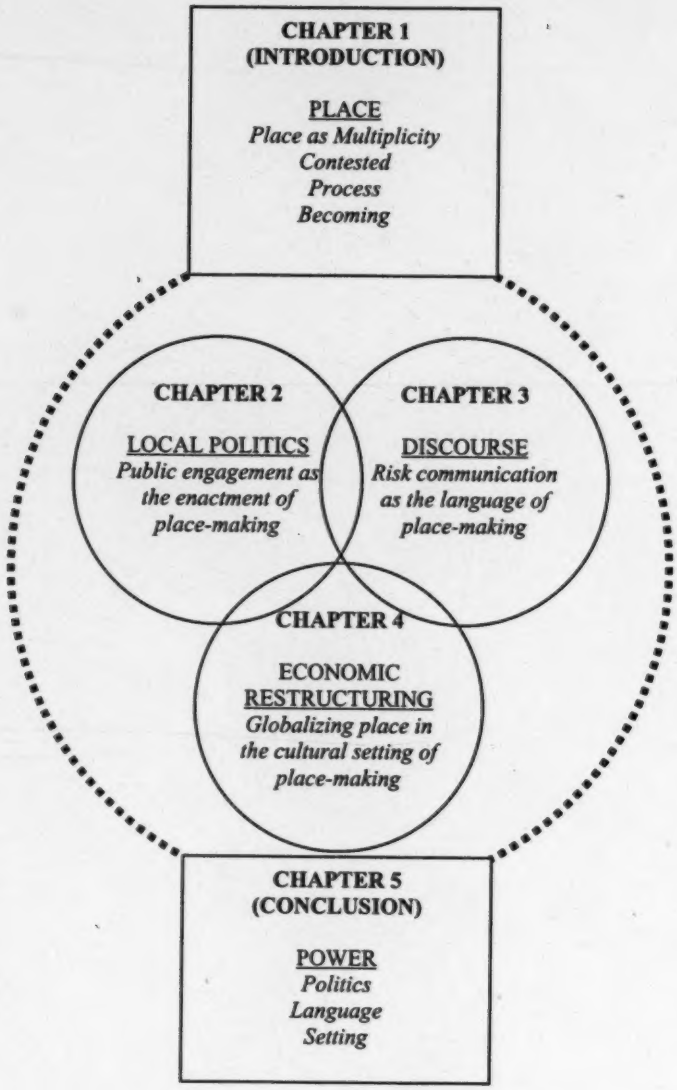


**Fig. 1.4. Overview of the thesis.**

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# Chapter 2.

## WHAT MAKES PUBLIC ENGAGEMENT FAIL? ELUCIDATING SOCIAL CONTEXT WITH A 'BALANCE OF POWER'[2]

In the past three decades, public engagement has developed as a valuable public policy tool for including citizen perspectives in decision-making ranging across social justice (Arnstein, 1969), health (WHO, 2002), urban planning (Campbell and Marshall, 2000), and environmental management (Baxter, Eyles, and Elliott, 1999a, 1999b). The concept of public engagement has been recently defined as "the practice of involving members of the public in the agenda-setting, decision-making, and policy-forming activities of organizations/institutions responsible for policy development" (Rowe and Frewer, 2005; p. 253). While few would question this definition, precisely how to best engage the public and its effect on the quality of policy decisions has been the subject of extensive debate in both research and practice. Making sense of public engagement has become a critical area of research as more and more citizens come to expect inclusion in policies that affect their lives. Moreover, because of the particularly sensitive nature of environmental management, public inclusion has become widely mandated through legislation at all levels. Through these legal imperatives and public pressure, public engagement has pervaded contexts as diverse as nuclear decommissioning (Bond, Palerm, and Haigh, 2004) and recreational land use planning (Halseth, 1993). A proliferation of public engagement strategies in such diverse contexts makes it important to understand how policy decision-making unfolds within local dimensions of program planning and implementation. The purpose of this article is to apply a mixed-method research design to situate an evaluation of the local dimensions of public engagement within a local political context of place-making through a case study of environmental policy decision-making. The multiple data sources include document and newspaper analysis, as well as qualitative interviews to explore the local politics of public engagement in an industrial region in Alberta, Canada.

### 2.1 Background

Since the 1970s, there has been a rise in the level and breadth of distrust in the expertise and accountability of authorities with regard to contemporary economic development and environmental management (Kettl, 2000). Most often indicted as the causes of this distrust are factors associated with a globalizing politico-economic system that has led to new uncertainties and risks in the lifeworlds of citizens (Beck, 1992). In this environment of distrust, there has been a move away from expert-driven policy-making models toward ones where citizens demand a voice in framing environmental policies (Rowe and Frewer, 2004). The emergence of a more active citizenry heralds the decline of representative democracy toward new forms of governance. Moves towards

[2] This article will be submitted to the journal *Area* for review.

more direct forms of democracy engage the public through mechanisms that share power and bring lay perspectives into the decision-making process (Laird, 1993; Smith and Blanc, 1997; Overdevest, 2000). This shift has led to an increased role for local democratic structures in the everyday lives of citizens (Kettl, 2000; Savan, Gore, and Morgan, 2004). For better or worse, local governments are now more involved in reconciling the competing interests of the private sector, non-governmental organizations, and grassroots citizens' groups (Overdevest, 2000). With the devolution of responsibility to the local level, it becomes increasingly important to view governance in the light of the local social context in which decisions now take place (Kettl, 2000) in order to enable and improve the sharing of decision-making power with citizens.

However, at the local level, studies show that an environmentally aware public has become increasingly critical of governments' inability to represent public interests over those of industrial and corporate developers (Frisby and Bowman, 1996). Disagreements about appropriate development continue to result in open conflict and the breakdown of trust between governments and citizens (Baxter, Eyles, and Elliott, 1999a, 1999b). Public engagement in local decision making has thus become both a moral imperative (Catt and Murphy, 2003) and in many cases a legal mandate (Brody, Godschalk, and Burby, 2003) that is increasingly looked upon to foster better relationships between government and the public (Lawrence and Deagen, 2001; Illsley, 2003). This has been especially true with regard to contentious environmental decision-making around land use, resource exploration, waste disposal, and the siting of industrial development (Laird, 1993; Baxter, Eyles, and Elliott, 1999a, 1999b; Konisky and Beierle, 2001; Rollins, Robson, and Robinson, 2001; Bradshaw, 2003; Halseth and Booth, 2003; Baxter and Lee, 2004). These activities often take place in proximity to communities whose residents may experience not only physical but also social and psychological consequences of industrial emissions or accidents (Edelstein, 1988). Understanding how public engagement is carried out within such controversial cases requires sensitivity to local circumstances in which decision-making takes place.

*Evaluating public engagement*

Despite the consensus among authorities as well as legal statutes supporting public engagement, its implementation has met with mixed results. When successful, public engagement can generate trust, credibility, and commitment towards environmental planning, as well as enhance community capacity (Brody, Godchalk, and Burby, 2003). However some authorities choose public engagement strategies merely to satisfy public relations objectives in order to project a positive image with the public (Frisby and Bowman, 1996; Halseth and Booth, 2003; Irvin and Stansbury, 2004) or to uphold corporate and state power in the interest of profit or political gain (Gagnon, Hirsch, and Howitt, 1993). It is therefore a critical task for social scientists and evaluators to distinguish between high and low quality public engagement strategies to ensure that both citizens and authorities are satisfied that decision-making ultimately leads to improved environmental policies. With such knowledge, researchers can develop better public engagement practices that are adapted to the circumstances 'on the ground' in which policies are being formulated.

Evaluating the effectiveness of public engagement has been the subject of a considerable range of scholarly inquiry. Since the publication of Arnstein's seminal 'ladder of public participation' typology in 1969, researchers have sought diverse ways to organize different forms of public engagement according to their relative impact on the outcomes of policy decision-making (Arnstein, 1969; Sinclair and Diduck, 2001; Catt and Murphy, 2003; Rowe and Frewer, 2004). In the decades that have followed, a proliferation of mechanisms has made this quite a complicated task. For example, Rowe and Frewer (2005) counted as many as 102 distinct mechanisms ranging from the provision of information to the public (e.g. flyers, brochures, open houses), to the solicitation of information from the public (e.g. surveys, study circles, focus groups), to full dialogue between authorities and the public (e.g. citizen's juries, consensus conferences). Furthermore, the stated objectives of public engagement strategies are wide-ranging, including addressing social justice, equity and citizen empowerment, increasing legitimacy of government authorities, improving the quality and transparency of decision-making, and increasing support for and efficacy of environmental policies (Arnstein, 1969; Fiorino, 1990; Brody, Godchalk, and Burby, 2003; Catt and Murphy, 2003; Mascarenhas and Scarce, 2004; Rauschmayer and Risse, in press). Amidst such diversity of mechanisms and objectives, it has been difficult to elucidate precisely what determines effective public engagement.

Despite the challenges faced by researchers, evidence to-date documents several key factors that are known to improve public engagement. These include such factors as early involvement, inclusiveness, transparency, level of empowerment, provisions for two-way communication, and incorporating public values (Fiorino, 1990; Lawrence and Deagen, 2001; Santos and Chess, 2003; Bond, Palerm, and Haigh, 2004). Even though this knowledge pervades public engagement research and practice, the literature continues to reveal case after case of poorly executed public engagement (Stratford, Armstrong, and Jaskolski, 2003; Irvin and Stansbury, J., 2004). What makes certain programs go wrong despite good intentions and well-formulated strategies is still not well understood, but determining the local context in which particular public engagement strategies are formulated and play out 'on the ground' may provide part of the answer (Davies, 2002; Catt and Murphy, 2003; Bond *et al*, 2004; Rowe and Frewer, 2005; Martin, 2003).

*A contextualized approach*

Since the social movements of the 1970s, contextual issues have become increasingly important in environmental decision-making. Increasing pressure by concerned citizens has forced environmental management at all levels to become more accountable to the public interest (Frisby and Bowman, 1996; Owen, Howard, and Waldron, 2000; Brody, Godschalk, and Burby, 2003). At the root of many environmental conflicts is the problem of anticipating and planning for the interests among diverse stakeholders who come from different backgrounds and have competing interests (Gagnon, Hirsch, and Howitt, 1993; Konisky and Beierle, 2001; Sinclair and Diduck, 2001). In such circumstances, it is difficult to ascertain what types of public engagement

should be implemented as the public response is often unpredictable. In many cases, public engagement fails to adequately represent social complexity, including cultural values, individual economic interests, and the resulting power inequities that are inherent in direct forms of democracy. More research is needed to tease out the attitudes, experiences, and local social interactions of stakeholders in public engagement in order to address these problems (Rowe and Frewer, 2004).

The case study presented in this chapter builds on recent calls for a contextualized approach to the evaluation of public engagement (Rowe and Frewer, 2005). The research uses three methods to understand local dimensions of a particular public engagement process. In particular, document analysis, newspaper analysis, and qualitative interviews reveal the perspectives of local authorities, media, and residents as they participated in or commented on a locally implemented public consultation program[3]. These approaches helped to reveal contextual dimensions that underlie the local politics of public engagement, including attitudes and behaviours, opportunities and constraints with regard to industry and regulations, and the municipal-level policy environment.

*Alberta's Industrial Heartland*

The study area encompasses a region in Alberta that has been undergoing rapid economic, social, and cultural change over the past 50 years from the development of natural resource extraction and processing industries (Chastko, 2004). Since WWII, the oil and natural gas sector has come to constitute a multi-billion dollar revenue source for the province (Alberta Revenue, 2004). In the wake of rapid economic development, these industries have left a large environmental footprint. Seismic lines, oil and gas wells, pipelines, and downstream industrial processing facilities have created a mosaic of industrial activity on the physical landscape of many parts of the province (Keeling, 2001; see Figure 2.1). In many communities, this activity has led to widespread public concern and resistance over siting processes and safety plans around resource extraction and industrial development (Whiting, Krepakevich, and Thompson, 2001). There is thus a need to adopt more effective land use management plans to coordinate development with the public interest.

It was under these conditions that four municipal governments in central Alberta came together in 1998 to create a regional industrial development plan called the *Alberta's Industrial Heartland* (AIH). The purpose of the AIH was to coordinate local economic strategies by delineating a special region to be set aside for future petrochemical industrial development. According to an early public announcement released by the newly formed *Alberta's Industrial Heartland Association* (AIHA, or the 'Association'), the benefits of the AIH included job creation, and to "feed local and provincial economies and help position Alberta as a key player in the global economy" (AIHA, 1998; p. 17). Plans called for changes to the zoning of 194 $km^2$ of existing industrial, agricultural, and residential properties to foster more industry-friendly local land use policies. The proposed industrial area was to be situated at the rural-urban

[3] The term 'public consultation' throughout this paper refers to the locally applied term for the strategies employed by local governments in the case study.

interface approximately 30 km northeast of the City of Edmonton and adjacent to Fort Saskatchewan, a small industry-dependent town of about 13,000 people (see Appendix A). Authorities argued that from an economic standpoint, the local geography of this region was ideally suited for further industrial development. Existing industrial infrastructure (e.g. rail lines, oil and gas pipelines), geographic features (e.g. subsurface salt caverns, water access), and a skilled workforce all helped to place this region at the centre of the provincial blueprint for economic development (AIHA, 2002). As part of the plan, authorities implemented a local public consultation program between 1999 and 2001 to solicit input of local residents about the proposed changes to land use and environmental regulations. The present research is based on people's experiences related to their involvement in the public consultation program and their perspectives on the AIH proposal in general.

## 2.2 Methods

The research project utilized three qualitative and interpretive data collection and analysis methods. First, a document analysis including local planning reports, newsletters, flyers, and promotional items provided data from the 'official' perspective of the AIH proposal. Second, an analysis of local newspaper coverage obtained a diverse range of viewpoints about the AIH and the public consultation program that were considered 'newsworthy' to citizens of the area. Third, two rounds of individual interviews and one group interview provided in-depth access into the everyday lives of residents of the area as well as those of AIH stakeholders from government, industry, and local business.

*Document analysis*

The document analysis provided a means to reconstruct the 'official' version AIH public consultation program. Key public documents[4] produced by local planning authorities, including newsletters, information sheets, reports, and websites, were catalogued and subjected to a holistic content analysis (Wakefield and Elliott, 2003). Specifically, excerpts from the documents that contained information pertaining to the public consultation program were archived according to the timeline in which they occurred. These included formal plans and timelines, evidence of written feedback from public input, and public relations material. Together, this material provided a means to piece together the main events of the consultation program, including their purposes and outcomes.

*Newspaper analysis*

The newspaper analysis included three local weekly circulations, the *Fort Saskatchewan Record* (FR), the *Sturgeon Creek Post* (SCP), and *Strathcona County This Week* (SCTW), that together spanned the geographic distribution of the population in the study area. In the first step of data collection, articles were collected through an extensive

[4] Most of the documents in this analysis are available in appendices of the AIHA Background Report (2002).

manual search of four years of newspaper coverage (January, 1998 to December, 2001). The search identified 1103 relevant articles that contained information about industry, including economic reports, public safety messages, community relations stories, industrial risks and accidents, and government regulations. The data set included news stories, press releases, public announcements, cartoons, editorials, letters to the editor, and advertisements. To assist with the analysis, articles were catalogued according to date, title (with sub-headings), author, page number, type of article, article size ($cm^2$), author, and the first sentence of text. In addition, the articles were coded according to a set of 11 pre-set industry-related themes derived from Wakefield and Elliott (2003) that provided the basis to sort the articles according to a series of industry related topics. Three levels of themes were identified according to the article headline (primary theme), main topic (secondary theme), and, if applicable, the first related topic (tertiary theme). Furthermore, articles were coded according to overall tone in regard to being supportive, neutral, or critical of the AIH.

In the second step of the data collection, the full articles were searched for the keyword 'Heartland' to identify all articles that related specifically to the AIH. The final dataset used in the analysis of the AIH included a total of 98 articles (24 FR, 34 SCTW, and 40 SCP). Manual coding of this final set of articles provided another basis for reconstructing the timeline of events and a means to derive trends in the topics and tone of the newspaper coverage, as evidenced by the thematic coding described above.

*Interviews*

Two rounds of semi-structured interviews gained input from 33 respondents[5] (Appendix B) recruited through a combined random (n=10) and snowball selection (n=20) process. The interviews were conducted with rural landowners and business owners (n=20), local authorities (n=7), and industry and media representatives (n=3). The interview guides (see Appendices C through H) were designed to solicit responses about the social context of the AIH proposal, including conceptions of community, experiences in a changing economic and cultural landscape, views about risks associated with industrial development, and power relationships observed during the public consultation program. Five strategies ensured that principles of rigour were upheld during data collection and analysis (Baxter and Eyles, 1997). First, the interview guides were pilot tested with two volunteers prior to implementation in the field to ensure that question paths were appropriate and easily understandable. Second, following individual interviews, a group interview of a sub-sample of interview respondents representing residents, government, and industry (group size = 7) provided an opportunity to reflect on the emerging results. Third, after each round of interviews, respondents were provided transcripts of their interview to allow them to make changes, additions, or omissions. Fourth, respondents' anonymity was safeguarded through the use of pseudonyms in the reporting of project results. Finally, a community advisory committee representing key

[5] The term 'respondent' is used throughout the thesis. While I recognize the disadvantage of the term in the sense that it contains connotations of one-way information gathering, I am avoiding the preferred term 'participant' because it creates confusion between participation in the study versus participation in the AIH public consultation program.

stakeholders among residents, government, industry, and provincial agricultural organizations met at the beginning, middle, and end of the project to ensure that the research remained relevant to the local community and provincial policy contexts.

Interviews were tape recorded, transcribed verbatim, and imported into a qualitative data analysis software package (NVivo™). Analysis began with a round of free-coding of the raw data across all transcripts into categories. These categories developed into more concrete emergent themes with further data collection and analysis (Esterberg, 2002). This process continued until no new themes emerged (i.e. data saturation). The final result was a dataset containing a hierarchical tree topped by nine general themes which formed the main branches with numerous branches of related categories below these (Baxter, Eyles, and Elliott, 1999a). Excerpts from each of these categories are used to link the data to theoretical constructs in the analysis.

## 2.3 Findings I: What happened

### 2.3.1 Quantitative analysis – Counting newspaper coverage

Newspaper coverage of the AIH proposal provides the first level of analysis of the AIH and its public consultation program. The coding scheme (Table 2.1) shows the detailed breakdown of primary, secondary, and tertiary codes of the newspaper articles related to the AIH. Of the 98 articles, a total of 59 (or 60%) were centred on 'conflict/concern/criticism' surrounding the technical details, planning process, and public consultations related to the AIH. The next most prominent theme found in 25 articles (or 26%) related to 'technology/development/industry', indicating the AIH coverage focused mainly on infrastructure and the technical nature of the AIH. The third key theme included 22 articles (or 22%) centred on 'process/public consultation', suggesting that the public consultation program itself figured prominently in the public discourse surrounding the AIH. The remaining seven codes in Table 2.1 relate to public concerns about the AIH including environment, land rezoning, economic issues, risks, community effects, nuisances, and industrial accidents.

The breakdown of articles according to supportive, neutral, and critical tone related to the AIH set the stage for further analysis of how the public consultation program proceeded over time. Figure 2.2 shows the 98 articles on a monthly timeline between the period of March, 1998 and December, 2001. The shading identifies 70 articles coded as 'critical' (black), 17 articles coded as 'neutral' (grey), and 11 articles coded as 'supportive' (light grey) of the AIH and the public consultation program. The newspaper coverage was spread out over the duration of the development, consultations, and approval of the AIH, but with a significant period of increased critical coverage toward the last six months of the public consultation program.

The volume of coverage reveals four 'peaks' that relate to key events. The first peak of coverage between March and July, 1998 documents the initial launch of the AIH and the formation of the Association. A second peak in coverage between December, 1998 and June, 1999 announced developments related to the Association's activities and the launch of the formal consultation program. Each of these initial peaks included a mix

of mainly supportive advertisements and neutral news coverage, with very little critical coverage. It is important to note that newspaper interest was low during all five original phases of the public consultation program (between September, 1999 and May, 2000). This absence of newspaper coverage abruptly ended when a third peak occurred at the end of the last phase in June, 2000. This peak was strongly critical and immediately preceded an 'extended' phase of public consultations that lasted until August, 2001. Finally a fourth peak shows a substantial increase in critical coverage (from three articles to a peak of 11 articles in March, 2001) that extended from September, 2000 to the end of 2001 and coincided with the extended phase as well as the formation of the *Heartland Citizens' Coalition* (HCC; see next section). The growing criticisms reveal that the consultations were devolving into further conflict, rather than progressing toward a resolution between planners and the public. According to study respondents who were members of the HCC, this group was particularly active in the media in criticizing the AIH proposal in general, and specifically the public consultation program.

### 2.3.2 Qualitative analysis – A contested AIH story

An in-depth review of documents and newspapers enabled a reconstruction of the key events associated with the public consultation program. This process helps to illuminate differences between 'official' perspectives of the consultation program stemming from policy documents and information flyers, and more 'public' version of events, as controlled by local newspaper sources and indicated by the responses and opinions contained in articles, editorials, and letters. Table 2.2 provides a summary of five phases of public consultations that took place leading up to the approval of the AIH proposal by all four municipalities.

*Preparations for public consultation (May, 1998 – August, 1999)*

In May, 1998, political enthusiasm for the AIH had solidified to the point that a formal relationship established among four municipalities culminated in the creation of the Association. The Association was tasked to implement the development agenda of local governments and was responsible for carrying out the steps needed to establish the legal and regulatory parameters for the newly established AIH proposal. The Association reported to a Steering Committee comprised of political representatives from the four municipalities. From the outset of its creation, the Association recognized the importance of involving the local population in the planning process. An early four-page newspaper announcement informed the public that:

> *Input from all participants will ensure the Heartland development produces the highest economic and environmental returns for the region. Local residents can make their views known through advisory groups which will be formed for specific initiatives as well as through established public processes.* (AIHA, 1998)

To help establish the technical framework for the AIH, a specialist in eco-industrial planning provided expert advice on formal Area Structure Plans (ASPs) being prepared

for each municipality. ASPs would form the first step in a regulatory and legal framework that would support revisions to land use zoning (e.g. residential, light to heavy industry, protected areas) and establish principles of efficient and coordinated industrial development. The eco-industrial philosophy applied to the AIH proposal focused on ensuring a collaborative approach to the management of environmental and resource issues (e.g. energy, materials, pollutants) (see also Ayres and Ayres, 1996). According to the newspaper announcement, human dimensions of the philosophy were limited to factors that would enhance industrial cooperation (e.g. transportation, training, emergency response planning).

Despite the positive messages in official public announcements surrounding the creation of the AIH, editorial coverage of the Association launch painted a more critical picture of early plans. One editorial, titled "Industrial Hypeland all Smoke", wrote:

> *The project got underway with a $60,000 party...A four-page publication in one of the other newspapers talks about how the new team will consult with the public, set new standards of excellence, build partnerships, plan, promote and diversify our local economy. Sounds good. But so far the only thing this new partnership has agreed upon is to spend money on advertising to attract new industries to our area.* (SCP Editorial, 1998a)

This example of early criticism of the AIH prior to the beginning of the public consultation program foreshadowed future problems that authorities would face later once the public consultation program began. By December, 1998, public sentiment toward the AIH was already becoming critical. One article featured the photograph of a sign erected by a local resident who was upset that his land was being advertised for sale by authorities without his knowledge (Figure 2.3). The frustration implied by this image suggests that the efforts to begin planning and advertising the AIH proposal in newspapers and on the internet prior to notifying residents was a mistake.

*Phase One: Familiarization (September – November, 1999)*[6]

As part of the process to develop the AIH proposal, the Association hired a third party firm to oversee the formal public consultation program. Phase One of this process included steps to familiarize planning authorities (the Association, the Steering Committee, and consultants collectively) with the local biophysical, demographic, and economic conditions necessary for the proposed eco-industrial ASPs. Prior to including the public, the authorities reviewed background materials, prepared maps (including a first draft of AIH boundaries), and analyzed biophysical attributes and constraints of the local area. Authorities then prepared a preliminary list of stakeholders to include in the public consultation program. A first newsletter which contained introductory print materials mailed to the list of stakeholders, invited them to participate in the public consultation program. The mail-out contained information advertising a series of

[6] Although not mentioned in earlier documents, the AIH Complementary Area Structure Plans Background Report (2002) lists five phases for the consultation program that were conducted over three years. For convenience, the sections that follow are based on these five phases.

opportunities that included three rounds of open houses (November, 1999; February, 2000; and originally March, 2000), a workshop for key stakeholders (December, 1999), and presentations to council at final public hearings (originally April, 2000).

According to the first newsletter, the purpose of the first round of open houses (November 3 and 4, 1999) was to "introduce the planning study and gather [public] thoughts about the area and planning process" (AIHA, 2002). These open houses were scheduled to include document viewing between 3 and 9 p.m. with evening presentations at 7 p.m. Following the open houses, authorities released a one-page *Answers to Open House Questions* information sheet that dealt with issues raised by members of the public that related to the environment, infrastructure, eco-industrial development, land use zoning, and overall AIH concept (AIHA, 2002). Notably, there was no newspaper coverage of the initial round of open houses. That local media did not show up to the so-called 'open' houses suggests intention by authorities to keep the event out of the public view.

*Phase Two: Analysis and evaluation (December – January, 1999)*

Phase Two of the consultation program centred on a workshop for key stakeholders and entailed the creation of plans that would inform the development of the ASPs. The workshop, held on December 9, 1999, brought together representatives from industry, transportation, government, and residents to "provide detailed information on eco-industrial planning, the activities of the Association (and related studies) and the Area Structure Planning process and discuss several land use considerations in detail with these key stakeholders" (AIHA, 2002; p. 4-5). The outcome of this workshop was a three-page *Comments and Suggestions from Planning Workshop* that focused largely on technical aspects of industrial development. Again, the absence of newspaper coverage of this workshop suggests that the event continued to remain outside of the broader public view.

*Phases Three and Four: Development of draft Area Structure Plans (January – May, 1999)*

In Phases Three and Four, authorities incorporated information collected from the preliminary eco-industrial plans and the workshop for key stakeholders to draft initial ASPs. Once the ASPs were complete, a second newsletter was mailed out to the stakeholder list to advertise the second round of open houses (February 16 and 17, 2000). This second round would provide the public with an opportunity to review the ASPs and allow authorities to gather public comments (AIHA, 2000). A five-page summary *Land Use Planning in Alberta's Industrial Heartland* identified that concerns around land use, agriculture, and the environment were issues under consideration. In particular, the document provided assurance, in the tone of a sales pitch, to residents of the benefits of the AIH concept in an effort to ease their anxieties about the uncertainty associated with industrial development:

> *It is important to note that residents will benefit from the certainty of future land use and development opportunities as defined in the Area Structure Plans. The Plans will make it easier for new and current industry wanting to develop in the Heartland to determine where they wish their new facilities to be located. This will help the market define land values.* (AIHA, 2002)

In Phase Four, authorities incorporated feedback from the second round of open houses to create revised drafts of the ASPs. A third newsletter mailed out to the stakeholder list advertised the final round of open houses held in May, 2000. Following this third round of open houses, one resident was compelled to write to a local newspaper to state his/her reactions to the public consultations that had taken place so far:

> *Some committee of our province has designated our area as the Alberta's Industrial Heartland. The local residents were not consulted at a time when the World Wide Web was advertising our land for sale. Translations of this offer can be read on the web in German and in Japanese! We know that so-called progress and the global economy are buzzwords of our time. We hope, however, that residents would have some say in regarding the use of precious land passed on to us by our pioneer forbearers.* (SCP letter to the editor, 2000a)

That a resident would write such a letter after three rounds of open houses confirms that the public consultation program had not yet effectively reached all interested residents, nor did it satisfy public concerns.

*Phase Five and Extended Consultations: Preparation of Final Plans (June 2000 – August 2001)*

Phase Five of the consultation program was initially planned for May, 2000 and was to include presentations at public hearings of final ASPs to municipal councils. However, following the open houses, it became clear that a significant effort would still be required to appease growing public opposition to the AIH (as evidenced by the critical newspaper coverage after September, 2000). Further unexpected complications arose when representatives from industry asked for an opportunity to review the ASPs to ensure that the plans conformed to the expectations of companies already operating in the region. A meeting (June 9, 2000) and follow up interviews with at least six local industrial representatives provided industry with an opportunity to suggest improvements to the ASPs (AIHA, 2002).

By October, 2000 planning authorities felt they were prepared to present the ASPs before the four municipal councils. In a last effort to engage the public, a fourth newsletter advertised the 'final' public hearings that were scheduled for November and December, 2000 – a full eight months delay from the original date of April, 2000. The failure of the open houses and workshop became clear when these public hearings culminated in the most vocal public reaction against the AIH to-date. The impact of

authorities' attempts to limit involvement in the open houses and workshop became quite clear as evidenced by one resident who wrote a letter to the newspaper complaining that he had not been consulted:

> *We did not know anything about this and could not believe that something with such tremendous implications could be such a well-kept secret. When we began speaking to people in our community, we were met with blank stares.* (SCP letter to the editor, 2000b)

Public outcry during these hearings was so heated that elected officials in all four municipalities sent the ASPs back to the Steering Committee for further review. The fallout of these hearings echoed in all three newspapers throughout December, where more than ten articles related to the AIH appeared. As Table 2.3 shows, all ten articles, including news stories, letters to the editor, and editorials, decried the failure of the consultation program to listen to public concerns about traffic, loss of farm land, and health risks associated with industrial development. One newspaper story described the tone of the hearings:

> *If Fort Saskatchewan area residents had their choice, industrial development would not be allowed to encroach on their homes and lives...ten people, mostly from rural areas around Fort Saskatchewan, came before council to state in no uncertain terms, the fear they have of what will become of their existence if Heartland becomes a reality...near the end of the hearing, [one person] accused [the Mayor] of brushing off everyone's issues and not taking them at all seriously.* (FR news article, 2000)

Official documents interpreted this backlash in more neutral terms: "Although the public consultation process had been ongoing since September 1, 1999, the public at all four public hearings expressed many different concerns" (AIHA, 2002; p. 7). In other words, the ASPs did not meet with the approval of the public or industry, which set the stage for further consultations to provide more opportunities to convince stakeholders of the merits of the ASPs. This began with meetings of the Steering Committee in December, 2000 and January, 2001. The result was that during the six months between January and June, 2001, authorities hired a new consultant to coordinate "a period of extended and intensive public consultation as needed in [each] municipality with regard to their own ASP" (AIHA, 2002; p. 7).

Two further complications to the planning process transpired in January, 2001. First, residents of the town of Bruderheim became concerned about the developments around the AIH. The town had not been included in the AIH despite being situated in the centre of the formal boundaries between Strathcona and Lamont Counties. Because of this, several hundred town residents requested that town council set up a public meeting with the representatives from the other counties to try to resolve their concerns:

> *Until last December [2000], [one Bruderheim resident] thought Heartland was a tourism promotion....he presented a letter signed by 305 Bruderheim residents to town council asking them to set up a public meeting...the letter lists pollution, limits on the growth of the town, and that the distance between the town boundaries and the start of the transition zone is too short.* (Strathcona County This Week news article, 2001)

Despite the petition, the Bruderheim town council immediately refused their request. Instead, residents were told to express their concerns directly to the Association through the extended consultations that were being put in place. In other words, the Bruderheim town council wanted nothing to do with the plans or controversy taking place in other jurisdictions, leaving their residents to find other avenues to express their concerns.

A second complication leading up to the final public hearings was not included in official documents but deserves particular mention. In January, 2001, concerned landowners mobilized to form the *Heartland Citizens' Coalition* (HCC). This coalition expressed reservations about the ASPs, citing concerns that the plans had been developed without proper consultation of residents living in the region. The HCC, while stating from the outset that it was not opposed to industrial development, felt that the entire AIH consultation program had been poorly carried out. The HCC used several measures to have its concerns raised and to create a vocal public debate around the AIH. This included impromptu confrontations with the Premier of Alberta in February, 2001, media tours of the AIH region, and presentations at the final public hearings in April, 2001. The cartoon depicted in Figure 2.4 suggests that the HCC was effective in its attempt to show how authorities (depicted by the king) failed to meet the needs of citizens (depicted by the pitchfork-wielding farmers). Following the approval of the ASPs, the HCC filed a formal lawsuit in October, 2001 against Sturgeon County to ask for a legal ruling on whether the ASP was an infringement on landowners' rights (they lost). At the time of the writing of this thesis, the HCC continues in its efforts to raise concerns about the AIH.

In the face of this now outright public opposition, the plans for extended consultations to take place in 2001 included a series of facilitator-mediated individual and group consultations. Having learned from the unpredictability of opening the consultations to the general public, authorities hoped these smaller groups would provide more constructive avenues to quell public concerns and would prevent organized groups such as the HCC from having public venues at which to voice their opposition. However, this strategy once again failed to bring the public into the planning process itself, leading to further criticism of subsequent drafts of the ASPs over the next few months:

> *[A Strathcona County resident] says the fifth revised edition of the county's area structure plan was released last week and she's still not happy with the result. "They've extended the heavy industrial zone north and east and although [residential land development] restrictions have been dropped, I still have concerns...We've never had any definite*

*answers in regards to how and who has devised this map".* (FR news article, 2001)

Finally, amidst the continuing opposition being broadcast in local newspapers by the HCC and individual citizens, a second series of public hearings in the four municipalities took place to put an end to the ongoing dispute (two hearings concurrently on April 10 in Sturgeon and Lamont Counties; a hearing on June 26 in Strathcona County; and a hearing on August 13 in Fort Saskatchewan). In all four municipalities, these hearings resulted in the ASPs being approved.

## 2.4 Findings II: Why public engagement failed

### 2.4.1 Local criteria for public engagement

Thus far, the results have described a process where increasing public consultation coincided with rising levels of public concern, leading to open opposition and conflict between local authorities and members of the public. Analysis of the interviews shows that the failure of the public consultation program centred around four main context-specific and place-centred criteria, including: (1) *when* public involvement began; (2) *who* was included as stakeholders among the public; (3) *how* inclusive authorities were of lay knowledge; and (4) *where* public involvement took place both physically and in the everyday lives of residents.

*When: The timing of public inclusion*

Prior to the first round of open houses in November, 1999, authorities had prepared background material that would serve as the basis for the development of the ASPs. A mail-out package sent to a list of residents identified as being affected by the planning process (i.e. those who lived within the AIH boundaries) provided information about these early plans and invitations to participate in the public consultation program. The intent of the public consultation program was to showcase the ASPs to these stakeholders and invite feedback. However, this approach suggests that authorities thought that public interests could be 'added on' to the planning process already underway by the Association and its consultants. In other words, the process was being carried out largely within the domain of expert decision-making, rather than integrating the public into decision-making structures. For example, Darryl, an elected official and strong supporter of the AIH, held the belief that the inclusion of residents after plans were underway was an acceptable strategy. He highlighted the extensive efforts to engage the public at the end of the process, while failing to understand how the late timing of public input might be perceived by others:

> *At the time the plan was getting closer to approval and public hearings were coming up, we held a very extensive set of meetings between the local area Councilors, some of the planning staff. We probably undertook, certainly for the number of residents involved, the most intensive public involvement than we'd ever had for any issue for this area.* (Darryl, elected official; 021)

Despite Darryl's affirmations about the extensiveness of the public consultation program, some people objected to having been excluded from the preceding year-long planning process. For example, Ben recounted the anger of a neighbour who discovered that his property was included in maps showcasing the AIH 'for sale' on the internet without his consultation or consent:

> *He found out that [his land] is listed on the Internet for sale. It's for sale around the world. And he didn't know anything about that. And he's pretty active, really. It's not like he was out in the bush, reading his book or something; he pays attention to what's going on, active in the community, and he found that out. It's like, "Whaa? How did that happen?"* (Gerry; farmer; 005)

This 'internet story' was commonly cited example of opponents to the AIH who used it as an illustration of their exclusion from the planning process.

The preliminary planning upset residents who wondered if they could have any real or meaningful impact, given how much planning had already been done. For example, Rachel reflected on her experience of being discouraged from providing input when she became involved at the third round of open houses in May, 2000:

> *The first meeting I went to, that open house in May...[authorities said] you're coming in on the 11th hour, things are pretty well done. That's what was said to me. And yet we still had the public hearings to come up.* (Rachel, subdivision resident; 029)

Brenda, a local elected official at the time of the consultations, realized that the desire of authorities to have a well-prepared plan to present to the public meant that there was little room for further public input into the zoning changes and development plans:

> *A lot of people feel that public consultation was just an exercise. Because [they feel that] you've already made up your mind. And it doesn't matter what I say. And you get [from authorities] ... "Here it is. Tell us what you think". [And a resident says] "Well, I don't think this should be here or that should be there." [And authorities respond] "Well, it's too bad. We're doin' it. This is a public consultation. Just say yes or no."* (Brenda, former elected official; 022)

By utilizing the public consultation program as an opportunity to promote the AIH, authorities hoped to 'rubber stamp' the proposals for public acceptance. In doing so, they neglected to consider the possibility of including a meaningful public voice early in the planning process.

*Who: Identifying stakeholders*

Prior to the start of the public consultation program in November, 1999, authorities identified stakeholders based on formal land zoning boundaries drawn up in the draft AIH proposal. Residents with mailing addresses inside the AIH boundaries received invitations to participate in the original three rounds of open houses. The rest of the local population living outside of the AIH boundaries received little information or notification (other than notices in rear pages of local newspapers) until mandatory public announcements were sent out two weeks prior to the public hearings in November, 2000 – a full year after the start of the initial stakeholder discussions. For the general public, the AIH was not initially a visible issue. Residents who were excluded from the stakeholder list generated by authorities only became aware of the open houses through informal contacts within the community. From the interest that these 'non-stakeholders' showed in the AIH, it quickly became clear that the extent of public interest in the AIH did not necessarily conform to the technical AIH boundaries delineated by authorities. For example, Corinna, who owned land in the AIH but lived in Fort Saskatchewan (and thus did not receive an invitation), felt that the notification process failed to reach the appropriate people. When asked about how she heard about the open houses, she responded:

> *It was when I read it in the "Fort Record." No one contacted us. If it's your land, and they're discussing what to do with your land, should they not have sent us a piece of paper that said "This is what we're proposing to do with your land"?* (Corinna, landowner; 013)

Only later did authorities realize their mistake in excluding the wider public. Bob, an industrial development administrator, commented on the marginalizing effect that boundary drawing had on people living outside of the formal AIH region:

> *If you were in one space you got a letter to your home, and another one you didn't. So people said, "they're trying to segregate". It's very unusual, actually, for notices for a non-developmental planning basis actually to go to homes. But it did distinguish them as special. So that means other people are not special, I guess.* (Bob, industrial development administrator; 028)

Furthermore, some residents interpreted the notification process as an intentionally exclusionary attempt to minimize public interest. For Rachel, these tactics continued through the course of the public consultation program. She resented authorities who she thought simply wanted to retain control over who could have a voice, even at the point of the public hearings in April, 2001:

> *Days before the public hearing [at the end of the public consultation program] I thought about another subdivision with lots of people that reside in almost the identical situation as us. We're on the south end of the border and they are on the north end of the border. And these people*

> *weren't informed. They limited [who could participate]. They seemed to keep everything under control.* (Rachel, subdivision resident; 029)

Excluding the general public from the consultation process became a focal point for distrust and resentment among residents from both within and outside of the AIH boundaries. In other words, these boundaries were not only seen as meaningless by residents, but became a geographic landmark upon which to ground opposition to the planning process.

*How: The role of lay knowledge*

A third local criteria of public engagement relates to the extent of opportunities for direct and meaningful public input. The stated purpose of the three rounds of open houses and key stakeholder workshop was to introduce planning documents and gather thoughts and comments from the public (AIHA, 2002). These ideas would then feed into existing plans developed by experts. However, in the interviews, several authorities wrongly interpreted this process, thinking that its focus should be on the dissemination of public information rather than a true consultation with the public. Their attitude reflected a view that the public needed to be educated about the merits of the AIH proposal and once people understood those merits, local citizens would accept it. For example, one elected official, Ben, strongly supported this one-way model of public involvement:

> *My personal thought is I think the communication process that was used for the public communication was excellent. There was plenty of opportunity for citizens to seek information. They were provided with numerous opportunities to gather information.* (Ben, elected official; 026)

Likewise, another elected official, Brent, believed that the role of the open houses was to 'sell' the AIH to the public and inform them of plans:

> *When you look at any open house,[it's] selling something. And if you don't have an open house to tell the people what you're doing, how are they as the public going to understand? We wanted to tell the people what we were doing in Heartland so we had an open house. And saying, if we rezone some land for heavy industry, this is where it's going to be. This is where we think is our best bet. And they had an opportunity to review [our plan]. If we didn't do that, if it wasn't an open house, how would they know?* (Brent, elected official; 025)

Adopting processes that limited input and only provided information to certain residents excluded them from meaningfully contributing to the planning process. Residents expected to be included in decision-making and resented being passive recipients of information. Residents felt that local expertise that resided in the community, as well as public values related to the environment, health, and safety should be included in the planning process. For example, Sam claimed to have accumulated extensive data in the form of traffic, air pollution, and noise levels to support his view

that industry was not effectively monitoring its activities. To him, this local expertise was crucial to effective monitoring and corporate accountability:

> *Industry does no wrong. I've got pictures of [flaring]. They even denied Dow Chemical's flaring. They've had flares that go 300 feet in the air. All that black stuff comin' out there, I got all kinds of pictures there. And they didn't believe that until me and a neighbour started takin' pictures, 'cause then we started sendin' these pictures all around. Four or five months, things started to get better. They don't have those big flares any more, with all that black smoke comin' out.* (Sam, farmer; 010)

The experience of some residents working in industry and living alongside industrial activity was also ignored in decision-making structures. For example, Fred, a retired subdivision resident who had career experience as a professional in industry, could not find an entry point to communicate his knowledge to authorities. He felt misled about the intention of the workshop for key stakeholders held in December, 1999:

> *It was to be a work meeting. But they had booths set up. You walked in and registered, they had handouts, and you were invited around to the different booths and ask questions. Alberta Environment was there, a couple of companies, the Alberta Environment and Utilities Board was there, and the county was there. But it was a promotional thing, again.* (Fred, subdivision resident; 003)

Fred thought the event would be a means to collaborate with authorities in a more detailed venue than the workshop or open houses. After-the-fact, he judged the 'workshop' to be nothing more than a trade-show for industry, government, and regulators. By keeping the planning process within the control of experts, authorities missed an opportunity to build in lay perspectives into the ASPs. In doing so, residents felt shut out of discussions and resented the decisions that were being made without them.

*Where: Everyday lives and space/time constraints*

Despite information in the Association's Background Report (2002) about authorities' proactive commitment to public inclusion, residents saw the extension of the public consultation program (implemented after August, 2000) as a reactive means to defuse an increasingly adversarial situation. One strategy that certain authorities used to defuse public discontent was to manipulate venues to control the extent of public inclusion. For example, in the final public hearings in April, 2001, Wilma, a civil servant, attempted to divide members of the HCC by hosting one county's public hearing concurrently with a hearing in another county:

> *I made sure that our meetings were held at the same time as everyone else. We tried to coordinate, so if we had public hearings, they were on the same days so they couldn't be in two places at the same time. I was not*

> *going to give somebody a public forum... So the more public meetings I could have without the [agitators] taking the mike, the better off and the better product we would get at the end.* (Wilma, civil servant; 030)

However, this strategy backfired as residents resented having limited opportunities to express their perspectives. For example, Leah admonished the municipalities for manipulating the consultations in order to disperse legitimate views of residents:

> *They held a meeting just for that subdivision with a councillor at the same time that the one in the town was going on. Like, why are they breakin' us up like that? So they didn't want them to hear what the other residents were already saying. There were a lot of things that were done deliberately, so that not many people would be there to say their piece, as far as I'm concerned.* (Leah, acreage owner; 011)

Similarly, Leah added that authorities ensured the timing of public meetings would intentionally disrupt the personal lives of residents in order to discourage involvement:

> *I found so many things that just annoyed me, like it was always trying to cover up something, from the meetings being held on Valentine's Day Valentine's evening, pardon me, which a lot of people already had plans for.* (Leah, acreage owner; 011)

Taken together, the four dimensions of public engagement described above (when, who, how, where) reveal that the public consultation program unraveled as a result of a failure to acknowledge the situated knowledge, constraints, and lifeworlds of residents. The open houses and workshop were originally structured to limit the scope of public engagement to those living within a circumscribed area, thus excluding the concerns of other residents outside of the AIH boundary. As the public consultation program unfolded, the inflexibility of authorities to accommodate and include members of the public resulted in a process that only worsened over time.

### 2.4.2 Outcomes of failure to meet local criteria

Intersections among all four dimensions of public engagement described above played a crucial role in determining the success or failure of the public consultation program. Failure to involve the public early, define all relevant stakeholders, incorporate lay knowledge and public values, and acknowledge constraints in people's everyday lives led to a breakdown in communication and relationships. Three direct implications resulted: (1) coalescing of discontent through a mobilization of community groups; (2) propagation of mutual distrust between authorities and the public; and (3) decline in the cooperativeness between authorities and the public.

*Coalescing discontent*

Far from being a close-knit community, residents in the AIH had a number of pre-existing social and cultural barriers that divided farmers from non-farmers. For example, complaints about nuisances of farming operations such as pesticide use, dust, smells, and noise had created a rift between farmers such as Chuck, and non-farmers such as Fred:

> *I can take you to an area just north here where there's a small overgrown slough or lake that has been pastured around there for 50, 60 years. Suddenly, there was an acreage development beside it. The people that were owning some of that pasture land, renting some of that pasture land, get a letter: "Get your cattle out of there. You've chased the deer away, you've chased the geese away." Well, when this acreage development was made, the deer were there, the geese were there, and the cows were there. Well, now, who chased the geese away? The people or the animals?* (Chuck, farmer; 012)

> *[Rural residents are] concerned about the chemicals, the herbicides and pesticides that are being used around us.* (Fred, subdivision resident; 003)

When faced with a common 'enemy' (the Association), these groups disregarded internal differences and came together out of a perceived need to raise their collective voice. Overriding the quarrels between farmers and non-farmers were worries about risks associated with pollution, industrial accidents, noise, and traffic. A common concern was the perceived infringement of the AIH on personal lives. For Jackie, whose husband farmed in the region, getting out of farming and selling the family home was an unfortunate, but inevitable, consequence of nearby industrial development:

> *I think the up and coming thoughts of more industry have put a little scare into people. It's definitely done it to us, and I think other people that maybe are at the crossroads in their life where they can either stay, pass it on to kids, or move on, have got a major choice to make. And sometimes it means just selling and moving on.* (Jackie, farmer; 004b)

Most of all, people were united in their anger about not being involved in decision-making. Ultimately, this anger compelled community members from all backgrounds to formally mobilize into the HCC. Rachel talked about the unifying effect that the HCC had on her neighbourhood, which she redefined over the course of the consultations to encompass the wider community consisting of both farmers and non-farmers:

> *I've worked closely, especially since the Heartland issues have come up; I've really got to know a lot of the neighbours. We have a lot in common. We have the same values. We care about our children, we care about the*

*lifestyle that we have, and we want to protect our neighbourhood.* (Rachel, subdivision resident; 029)

Ultimately, the strategy used by authorities of separation and exclusion backfired as people inevitably shared information and concerns through social networks within the community.

*Mutual distrust*

The public consultation program was weakened by a disjuncture between authorities' view that public consultation should be limited to information dissemination about technical plans and resident expectations of inclusion in the planning process. Instead of including residents into decision-making structures, authorities became increasingly suspicious of public concerns and of the HCC. For example, Ben could not understand how individuals would choose to preserve the region solely for aesthetic purposes at the expense of losing potential benefits for the wider population:

> *Several [residents], it doesn't matter what you do, other than the industry completely moving out of here, and moving to South America [nothing] is going to please them. They would have a pristine acreage in a pristine area. On the other hand, we wouldn't have the services. We wouldn't have any money. We wouldn't have the recreation services. We wouldn't have the health services. We wouldn't have anybody putting any money in to cleaning up our waste water, they'd be gone.* (Ben, elected official; 026)

Likewise, Cory reflected on perspectives of landowners whom he believed were holding out for lucrative compensation:

> *The arguments that people made were sometimes unfounded. A lot of the arguments that people made were based solely on "how do I get more money out of this thing? How do I jack up the price of what they're going to offer us? The more stink we make, the more money they're going to offer us, and the quicker they're going to do it to shut us up."* (Cory, elected official; 020)

In contrast, residents developed distrust toward the entire public consultation program that they felt was geared toward marginalizing their concerns from the outset. Sam, a landowner who lived in Fort Saskatchewan, believed that authorities failed to find reasonable solutions only because they were exclusively concerned with serving the interests of industry:

> *I think they're more concerned about paving the way for the industry. They don't really care about you on your acreage, or your farm, or anything out there; they could care less. And if a big cloud come over and wiped you out, they'd probably have a party. They could care less about the people.* (Sam, farmer; 010)

The limitations that were built into the process resulted in an irresolvable disjuncture between authorities and residents. From the perspective of the some residents, the entire public consultation program was designed to marginalize their interests and push through plans that served the interests of politicians and industry. For authorities, the criticisms they received over the course of the protracted public consultations only confirmed their view that the general public could not be relied upon to be supportive participants in decision-making.

*Decline of cooperativeness*

As the public consultation program unfolded, a sense of frustration between both sides became an increasing burden to communication efforts. Increasing polarization developed as the two sides continually failed to find common ground. This affected the overall climate of cooperation and had further ramifications for a successful outcome. The growing mutual animosity manifested itself in specific conflicts between impatient community members and frustrated authorities. For example, Ben's attitude toward residents became tainted to the point that he felt its only purpose was to provide a platform for a vocal minority:

> *[Public engagement] provides an opportunity for some of the more vocal citizens, to stand on their soap box and bring forward their individual agenda item to the media. With or without facts sometimes. Sometimes not thoroughly researched, but it gives them a soap box to stand up on. OK? But that's usually a limited number of citizens. You've got 30,000 citizens, there's maybe three or four they're standing on their soap boxes.* (Ben, elected official; 026)

This attitude was reflected in another incident described by Elmer, an elected official. He recounted an incident that was reported by several other study respondents involving an uncooperative county commissioner. On one occasion, this commissioner actively prevented citizens who turned out to a follow-up meeting from an open house from having their voices heard:

> *The problem was, we had one meeting, and then our administrator walked in, and he put his stuff on the table, and he said, "Here, folks, this is the way it's going to be." And then he said, "That will be five dollars for each of these copies"...And people just, they stood up and said, "Who are you to come here and treat us like with such disrespect", and I just sat there, and I thought, 'Oh, man, here I go, all these months of planning to find some kind of a balance is now just out the window'.* (Elmer, elected official; 024)

Likewise, residents gave up on the hope of a positive outcome and instead became committed to standing in the way of any prospective industrial operation. Rachel in particular was prepared to oppose industry so long as authorities continued to ignore public concerns:

*They are saying that industry will be welcomed with open arms. I think they might meet a lot more opposition than they think, and I believe that industry doesn't want to run into problems with the people. So if these problems aren't resolved, they can have all the plans they want, but I don't think that industry is going to be that attracted to an area that hasn't looked after their people.* (Rachel, subdivision resident; 029)

In sum, the failure to adequately include the public led to the breakdown of communication, trust, and cooperativeness among all parties. The end result was an environment of animosity and disillusionment and ultimately a plan that would not be accepted by the public-at-large.

## 2.5 Discussion

This chapter responds to calls for contextualized approaches to understanding public engagement (Rowe and Frewer, 2005). The public consultation program that was implemented for the AIH proposal provided an opportunity to examine how local criteria were impacted by social interaction, cultural values, and individual economic interests that fed into the communication between authorities in charge of public engagement, and residents who wanted their voices heard in the planning process. In an effort to control the extent of the public consultation program by including only those residents who lived within the AIH boundaries, authorities did not allow for a meaningful public role in the actual formation, development, and modification of the ASPs.

Over the course of the public consultation program, respondents reported resenting the timing of the consultation program, the notification process, the limitations imposed on public input, and the insensitivity of the program to constraints in their everyday lives. In response to perceived exclusion, members of the public took steps to ensure that the voices of residents (both within and outside of the boundary) were heard in the public debate. In the ensuing events, authorities did not respond effectively to the increasing opposition (via the *Heartland Citizens' Coalition*). Eventually, the public consultation program spiraled out of control and authorities became increasingly frustrated. Unwillingness to concede control of the processes to public demands only contributed to an environment of distrust and uncooperativeness. This ultimately perpetuated power inequities between authorities and the public, thus exacerbating communication problems. Clearly, the events that happened 'on the ground' did not conform to the original intentions of authorities. The public consultation program originally planned to take less than a year ended up being protracted an additional 18 months.

### 2.5.1 The 'community of fate'

The failure of the AIH public consultation program can be attributed to its inability to meet criteria that were fitted to the situated circumstances of the local resident community. The diverse perspectives and experiences shared by residents who participated in the public consultations matches recent conceptualizations of communities

that are oriented around conflict. Such communities have been linked to multiple and conflicting identities that converge in specific locales around specific environmental issues (Dalby and Mackenzie, 1997). As groups struggle and/or cooperate to assert particular views about what is appropriate and desirable in-place, public engagement becomes linked to the symbolic formation of community (Shields, 1991; Cresswell, 1996; Massey, 2004). These communities are largely *relational* – positional in space and flexible through time – and a synthesis of social, cultural, and economic forces that can occur at multiple scales and that have local effects on individuals and groups (Therborn, 1984; Massey, 2004). Catt and Murphy use the term 'communities of fate' to describe the process of disparate groups coming together to meet common goals. In this case study, a fluid, pluralist, and tentative group of residents aligned themselves within the public consultation program to accomplish common time- and place-specific ideals and goals (Catt and Murphy, 2003).

The results show that a failure to acknowledge the situated, place-sensitive and diverse lifeworlds of residents prevented successful public engagement. The 'community of fate' in the case study was found not in the realm of the physical locality outlined in the technical boundaries of the AIH proposal, but more-so in a symbolic locale and lived sense of place that was revealed from residents through newspaper coverage and interviews (Agnew, 1987; Cresswell, 2004). Multiple views on how the region should be developed created a politicized place within which public engagement occurred. As such, the public consultation program unfolded in a way that was unique to the social context of 'the Heartland'. Had the same processes been implemented in another place and involved different groups of people, different outcomes may have transpired.

### 2.5.2 Lessons learned – translating public engagement into 'balances of power'

A recurring theme of power came through respondents' views of the public consultation program. How to address power inequities has long been known to be a key barrier in improving public engagement theory and practice (Arnstein, 1969; Gagnon, Hirsch, and Howitt, 1993; Catt and Murphy, 2003). In the case of land use change, when a dominant view of a place is contested (e.g. industrial versus agricultural versus residential), a power struggle inevitably ensues over who gets to define place (Cresswell, 1996). The results show that power operated locally through place-centered dimensions of the public consultation program. Power played out as part of local dimensions of public engagement – in this case, it influenced when the public should be included in planning, who defined the boundaries of the AIH, how the public would contribute to planning, and where the timing and spatial arrangements of open houses and meetings should take place.

Public engagement therefore can be construed as a vehicle for power struggles that take place through formal arrangements between authorities 'in power' and the public who expect some degree of empowerment in decisions that affect their lives. A 'balances of power' conceptual framework suggests mechanisms in which power was enacted in the timing, notification process, format, and location of the public consultation program. Figures 2.5, 2.6, and 2.7 provide graphical representations of the balance of

power that underpinned the AIH public consultation program. The framework is based on authorities and the public on either side of a fulcrum that represents the public consultation program. The following sections explain in greater detail three ways power operated in the case study.

*Defining stakeholders*

Figure 2.5 shows how the criteria authorities used in defining stakeholders influenced the balance of power between authorities and the public. By establishing the AIH boundary as the means to limit participation, authorities (depicted as the larger light striped box) did not include other diverse groups who may have had a stake in the AIH (small boxes).

In particular, residents living outside of the formal boundaries of the AIH were not initially seen as important stakeholders. As such, the public consultation program went forward without an understanding or acknowledgement of the full spectrum of interests from within the local resident community. However, as more residents became aware of the implications of the AIH, people began to resent that their interests had not been adequately addressed and to coalesce around their concerns. Unfortunately, the inflexibility built into the consultations eventually led to an outright opposition to the AIH proposal and any efforts by authorities to reconcile the situation. Over time, the HCC mobilized around common threats even though those threats were to different aspects of people's lives (e.g. concerns about arable land versus country lifestyle). Such alliances demonstrate how people can find ways to merge social/cultural capital and power when faced with a common concern (Fukuyama, 1996; Labao, 1996; Owen, Howard, and Waldron, 2000; Doel, 2003).

The importance of engaging diverse groups has been dealt with by substantial literature based on the idea of citizen representativeness in public engagement (Catt and Murphy, 2003; Rowe and Frewer, 2000). This literature recommends that all stakeholder perspectives must be included if public engagement is to meet democratic ideals. Public engagement that does not seek out all perspectives is vulnerable to putting the interests of certain groups over others. In such cases, selecting certain perspectives often prevents or marginalizes the inclusion of other groups who may perceive themselves to have a stake in decision-making (Catt and Murphy, 2003; Rowe and Frewer, 2000). However, identifying stakeholders does not just mean targeting the population as a whole, but as the present research shows, it is also important to actively seek out *difference* within the community. In order to obtain the full range of perspectives, it is important to understand differences in the situated lifeworlds of the community (e.g. occupation, relationship to land, personal attitudes and beliefs), and how these differences might interact with each other to build or prevent synergy and complimentarity.

*Distrust of the public*

Figure 2.6 depicts a second way that power is enacted in public engagement. Distrust between authorities and community is both a cause and effect of poorly executed

public engagement (Ali, 1997; Baxter, Eyles, and Elliott, 1999b). Distrust-as-cause has been evidenced by research that demonstrates how conflicting perspectives about science, risk, and development between expert and lay knowledge can contribute to an environment of distrust (Garvin, 2001; Knight, 2001). For example, the inability of authorities to reconcile technocratic plans devised from land zoning considerations and eco-industrial philosophy versus the local experiential knowledge of residents created mutual animosity between authorities and the public (Fiorino, 1990). Distrust-as-effect occurred in the case study when authorities who were entrenched in their own worldviews were not willing to empower the public by providing a meaningful role in decision-making. As a result, any hope of building positive communication channels was diminished in an environment of uncooperativeness.

An important component of the role of trust in public engagement is the direction of the trust relationship. When considering reasons for the 'loss of public trust', strategies are most often based in terms of, 'How can authorities create strategies to regain the public trust?' Instead, the present research points to a second consideration that questions, 'How can the public trust authorities if authorities don't trust the public?' In this case study, it was evident that authorities saw the public as ignorant of the political and economic issues associated with the AIH. Authorities' distrust developed out of a lack of understanding that the interests of the public which lay in their personal lifeworlds conflicted with larger scale economic benefits of industrial development. The disjuncture occurred when authorities expected the public to embrace the good preparation completed in advance of the public consultation program, and expectations by residents that they would have a voice in decisions that affected their lives. This created conditions whereby authorities undermined their own attempts to instill buy-in and trust through negative attitudes toward the public. A public face of 'we know what is best' gave away a deeply engrained distrust of public views. By discounting the credibility of residents' points of view, authorities showed they were not willing to include dissenting perspectives in decision-making.

As Figure 2.6 shows, for authorities (large box) to win the trust of the public, they must first move *toward* the public (small boxes) to facilitate positive and meaningful public engagement. Understanding diverse knowledge and experience among participants in public engagement may not be so much a liability in effective decision-making, but rather an opportunity to create more nuanced and robust plans (Stratford, Armstrong, and Jaskolski, 2003). By presenting the public with opportunities for open dialogue and a meaningful role in decision-making, authorities could have created conditions for trust to circumvent open opposition to the AIH proposal. Despite the appeal of this approach, it remains an elusive goal so long as both sides remain entrenched in an environment of non-compromise. Distrust among participants in public engagement is only resolvable through a willing redistribution of power, even under circumstances where it appears preferable to retain control of processes and outcomes (Owen, Howard, and Waldron, 2000; Lahiri-Dutt, 2004). Any hope of positive change may require longer term investments by local governments in progressive-minded people occupying positions of authority and more innovative approaches to constructive public engagement.

*Manipulation of processes*

The final function of power in public engagement related to the 'spatial' fit of the consultation program into the situated and diverse lifeworlds of the community. Even in the most progressive strategies, power can play out around subtle space-time arrangements between authorities and the public. In this case study, there were widely diverse living and working circumstances within the community, ranging across people on agricultural schedules, homemakers with children at home and in school and sports, business people, and retirees. Respondents believed that the consultations were scheduled in a way that did not accommodate people's individual constraints. Furthermore, the intentional 'divide and conquer' strategies that some authorities used backfired and created resentment. Such resentment contributed to increasing levels of agitation and conflict during the public consultations.

In the opinion of some residents, authorities scheduled the timing and location of public consultations to coincide with what would be convenient for administrative interests (depicted in Figure 2.7 by the position of the fulcrum itself). Planning for public engagement would commence when authorities were prepared (e.g. maps, presentations, professional look and feel). By comparison, community residents viewed public engagement as an infringement on their personal time. Residents had to take uncompensated time away from their busy lives in order to make their views known. From this perspective, such conditions only increased the power inequities that were already in place. The more 'prepared' the authorities appeared (in an attempt to look professional), the less the community felt capable of influencing decision-making. This was because the professionalism sent a message that time, money, and energy had already been invested in the proposed solution. In other words, residents saw the decision as a 'done deal' and felt that their voices and concerns would not be heard.

To summarize, implementing successful local public engagement strategies involves negotiating a delicate balance of power where authorities must be sensitive to diverse and situated lifeworlds of the local community. In the AIH, all groups were just trying to do what was right for the community; however, precisely how different groups identified their community and what it needed varied. Authorities counted on establishing a technically sound plan to ensure that their citizens would receive the economic benefits of industrial growth in the region. But these plans did not take into account the potential impacts they would have at the scale of residents living in and around the AIH boundary.

## 2.6 Conclusion

The public consultation program originally conceived as including only three open houses and workshop turned out to be a controversial and reactive process that ultimately did not achieve its goal of garnering support for the AIH proposal. Authorities did not realize how the four local dimensions of public engagement (when, who, how, where) would affect the original consultation plans. In spite of two years of efforts by authorities to secure public acceptance of the AIH proposal, public discontent and

disagreement became more pronounced over time. By not overcoming the sources of these disagreements, the entire process resulted in disillusionment for people like Greg:

> *I think there's going to be a lot less participation in some of these meetings because people are getting fatigued. Eventually, you say, "Oh, well, what the hell can I do about it? I'm tired of going to these meetings. It's always the same thing, over and over again." So by the time this happens, there's going to be none of us going to these meetings, and the thing will go through. Unfortunately, I think that's where it's headed, because people are getting tired.* (Greg, farmer; 004)

In all of the cases above, critiques of the public consultation program hinged on the failure to include residents in a meaningful manner. The swift, technocratic approach adopted by authorities was an inadequate gesture to a public that had high expectations for involvement in decisions that would affect their lives. This failure led to a breakdown of communication centred on an inability to keep the public consultation program attuned to when the community should be engaged, who constitutes community, how the community should be effectively included in decision-making, and where the consultations should be located in the personal lives of residents. Public resentment eventually compelled residents to mobilize into the HCC in early 2001. Ultimately, the HCC was dedicated to putting an end to the AIH proposal – a position that spelled the end for any hope of a successful outcome of the public consultation program. At the time of the writing of this thesis, the polarization between authorities and the HCC still exists.

Public engagement in contemporary environmental management faces a burden where decision-making must be sensitive to the increasingly heterogeneous and politicized social and cultural landscape. However, current public engagement capacities are often under-equipped to accommodate these local complexities. This chapter has shown that politicized local public engagement strategies must address issues of power that are embedded in locally situated social interactions between authorities and the public. Limited understanding of the relationship between power and social context can create conditions that perpetuate conflict. Efforts towards effective public engagement must be reframed from 'how can we get the public to endorse our proposal' to 'how can our citizens be meaningfully involved in the discussion'?

**Table 2.1. Newspaper dataset of 'Heartland' theme.** Primary, secondary, and tertiary coding for all articles relating to the AIH (N=98).

| Key Theme | Source (N) | | | Total |
|---|---|---|---|---|
| | Primary | Secondary | Tertiary | |
| Conflict/Concern/Criticism | 10 | 35 | 14 | 59 |
| Technology/Development/Industry | 3 | 13 | 9 | 25 |
| Process/Public Consultation | 5 | 6 | 11 | 22 |
| Environment/Pollution/Emissions | 2 | 5 | 2 | 9 |
| Rezoning | 2 | 2 | 5 | 9 |
| Economy/Business/Employment | 1 | 3 | 3 | 7 |
| Risk/Safety/Health | 2 | 5 | 0 | 7 |
| Community | 0 | 1 | 3 | 4 |
| Nuisance/Noise/Traffic | 1 | 0 | 3 | 4 |
| Accident/Leak/Fire | 3 | 0 | 0 | 3 |
| Heartland | 69 | 23 | 6 | 98* |
| *Blank*** | *N/A* | *5* | *42* | 47 |
| **Total** | **98** | **98** | **98** | |

*'Heartland' was included in the pre-set coding scheme and served as the basis for analysis in section 2.3
**Several articles were not given secondary or tertiary codes (e.g. cartoons, very short articles)

**Table 2.2. Timeline of events of the AIH public consultation program.**

| Phase | Year | Month | Event |
|---|---|---|---|
| | 1998 | May | Alberta's Industrial Heartland Association formally created |
| One | 1999 | Sept – Oct | Draft materials collected<br>Expert consultant hired |
| | | Nov | Newsletter #1 with background materials |
| | | Nov | Open houses (Round 1) in Josephsburg (Nov 3) and Redwater (Nov 4) |
| Two | 1999 | Dec | Key stakeholder workshop (Dec 9) |
| Three | 2000 | Jan | Preparation of draft ASPs<br>Newsletter #2 |
| | | Feb | Open houses (Round 2) in Gibbons (Feb 16) and Bruderheim[a] (Feb 17) |
| Four | 2000 | April | Revised ASPs prepared<br>Newsletter #3 |
| | | May | Open houses (Round 3) in Gibbons (May 10) and Bruderheim (May 11) |
| Five | *2000* | *June 9* | *Consultation meeting with local industry*[b] |
| | | *June 30* | *Steering Committee meeting to discuss industry feedback* |
| | | Aug 10 | 'Final' ASPs submitted to Steering Committee |
| | | Oct | Newsletter #4 |
| | | Nov – Dec | Public hearings held in four municipalities (delayed from May/June 2000) |
| Extended | *2000 & 2001* | *Dec 18, Jan 8* | *Steering Committee meetings* |
| | *2001* | *Jan* | *Heartland Citizen's Coalition (HCC) formed*<br>*Bruderheim meeting (Jan 10)* |
| | | *Jan – June* | *New facilitator hired by the Association* |
| | | *Apr 10* | *Concurrent public hearings and final ASP approval in Sturgeon and Lamont* |
| | | *June 26* | *Public hearing and final approval in Strathcona* |
| | | *Aug 13,* | *Public hearing and final approval in Fort Saskatchewan* |
| | *2001* | *Oct* | *Court of Queen's Bench (lawsuit): HCC (plaintiff) vs. Sturgeon County (defendant)*[a] |
| | *2002 – present* | | *HCC continues to oppose industrial development in the region* |

[a]Although open houses occurred in Bruderheim, the town itself was not part of the AIH and its residents were not part of the public consultation program

[b]Rows in italics were not included in original public consultation program

**Table 2.3. All newspaper coverage related to the AIH in December 2000.**

| Date | Headline | First Sentence | Type of Article/Source |
|---|---|---|---|
| Nov 29 2000 | Heartland Plan Attacked | Acreage owners bombarded Sturgeon County Council with objections to heavy industrial development as proposed by Alberta's Industrial Heartland plan last week. | News article (SCP) |
| Dec 1 | County Council puts Heartland ASP on hold | Strathcona County is sending the area structure plan for the Heartland industrial area back to the drawing board. | News article (SCTW) |
| Dec 5 | Residents Kept 'in the dark' on Heartland plan | After three public hearing in three counties, Riverside acreage owner Anne Brown is amazed at how little people know of the proposed Alberta's Industrial Heartland. | News article (FR) |
| Dec 6 | Heartland Project railroaded | Dear Editor, I am writing this with the hope that you will communicate to the people the ramifications of the proposed Alberta Industrial Heartland Project. | Letter to the editor (SCP) |
| Dec 6 | Civic Officials need to communicate | A have yet to attend a public hearing that doesn't include at least one complaint about lack of information. | Opinion article (SCP) |
| Dec 6 | Heartland Hearing Monday | Fort Saskatchewan holds its public hearing on the Alberta's Industrial Heartland Area Structure Plan Monday, Dec. 11. | News article (SCP) |
| Dec 13 | Fort Hears Heartland Protest | Rural residents packed Fort Council Chambers Monday to protest plans for industrial expansion in the region. | News article (SCP) |
| Dec 15 | Heartland Industrial Plan Under Fire | Opponents of a giant heavy industrial zone spanning Fort Saskatchewan, Strathcona, Lamont and Sturgeon Counties took their fight to city hall, Monday. | News article (SCTW) |
| Dec 19 | Rural Residents Speak out Against Heartland | If Fort Saskatchewan area residents had their choice, industrial development would not be allowed to encroach on their homes and lives. | News article (FR) |
| Dec 19 | Proposed Heartland Project bad news for Lamont | I am a concerned Lamont resident who is shocked to learn about the planned heavy industry in our area. | Letter to the editor (FR) |

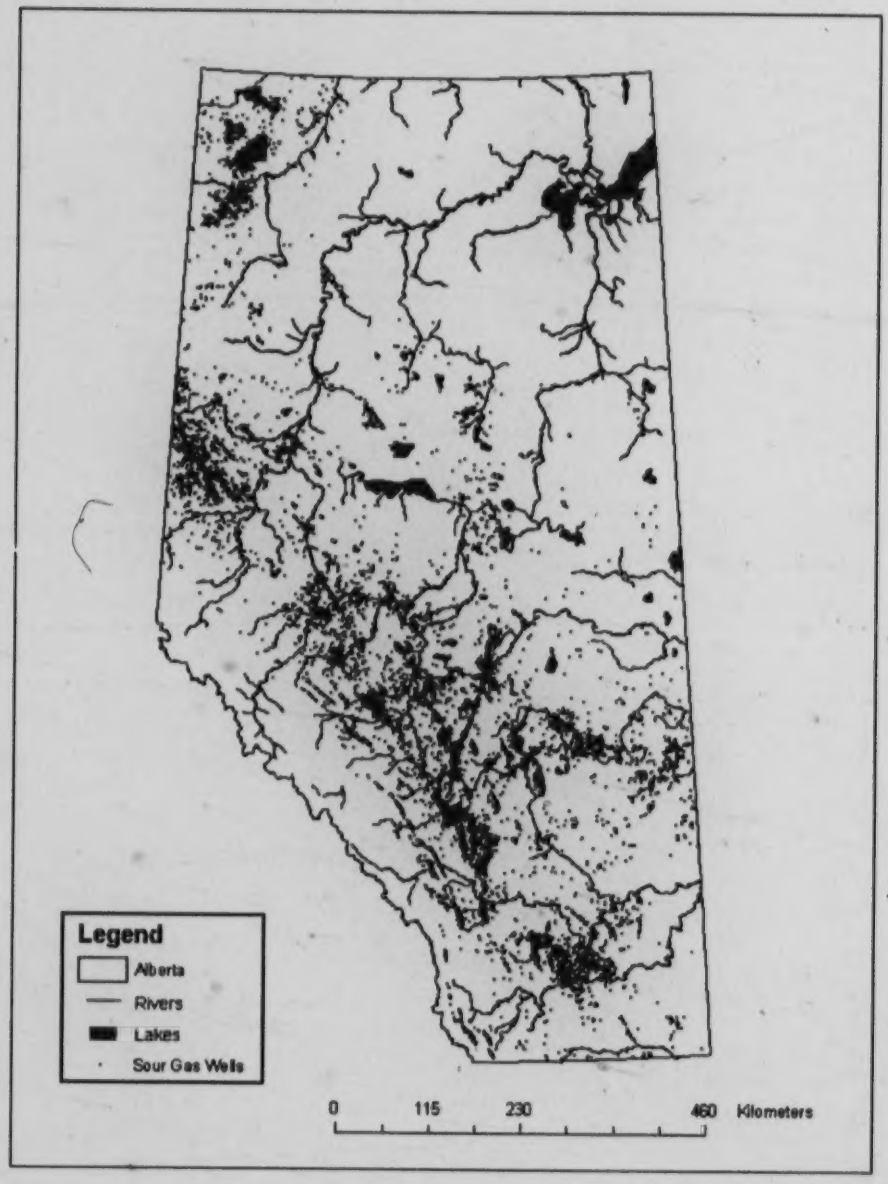


**Fig. 2.1. The 'Alberta Advantage'.** The extent of oil and gas activity in the province of Alberta as represented by the prevalence of sour gas wells. (Data source: AEUB, 2001)

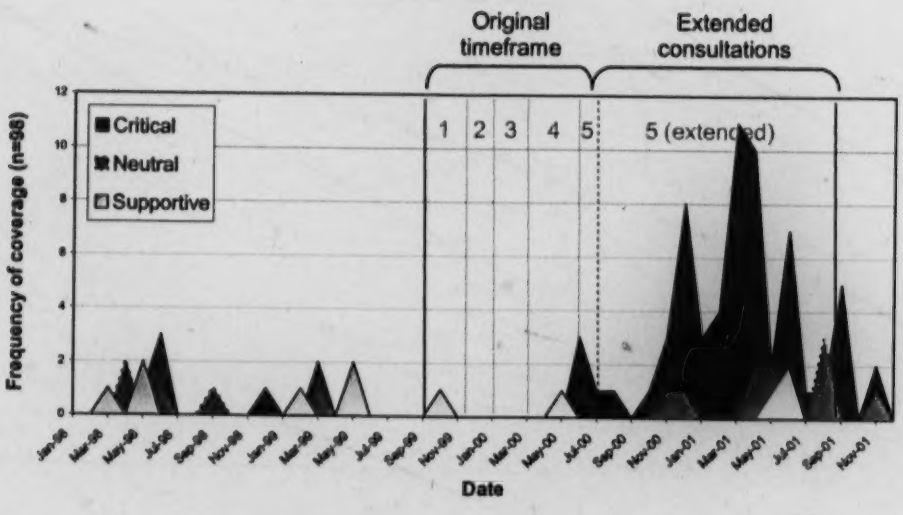


**Fig. 2.2. Newspaper coverage of the AIH 1998 – 2001.** The shaded areas show the extent to which the articles were coded as 'critical' (black), 'neutral' (medium grey), or 'supportive' (light grey) of the AIH. For reference purposes, the public consultation program phases are listed on the chart.

**Fig. 2.3. Photograph of a sign erected on the property of an angry resident against his Mayor (Sturgeon Creek Post, 1998b).**

**Fig. 2.4. Editorial cartoon of the public consultation program (Sturgeon Creek Post, 2001).**

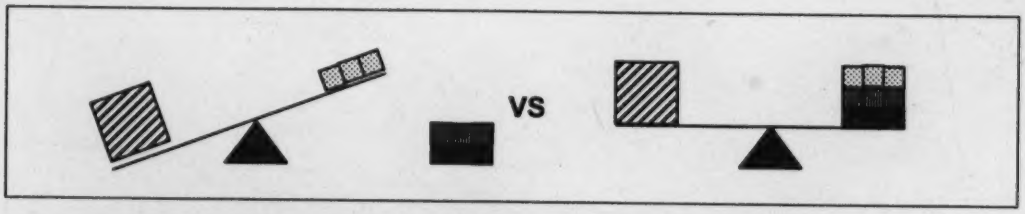


**Fig. 2.5. Defining stakeholders (who to engage).** Authorities are represented by the large striped box and different sectors of the public (e.g. farmers, country residents) are represented by the small boxes. Defining a sub-set of stakeholders without understanding situated lifeworlds of the public (left figure) means that certain groups may be left out of the process. When these groups become aware of the public engagement, they will mobilize as a 'community of fate' (right figure).

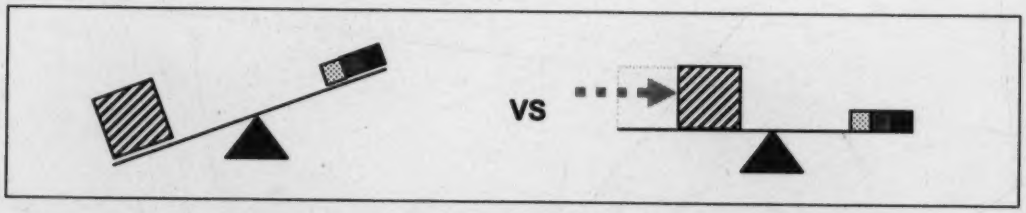


**Fig. 2.6. Distrust of the public (how to engage).** Trust between authorities and the public are represented by the position each party take on the balance. The typical power inequity (left figure) between authorities and the public, cannot be overcome unless those who control the distribution of power can overcome distrust by actively moving closer to their communities (right figure).

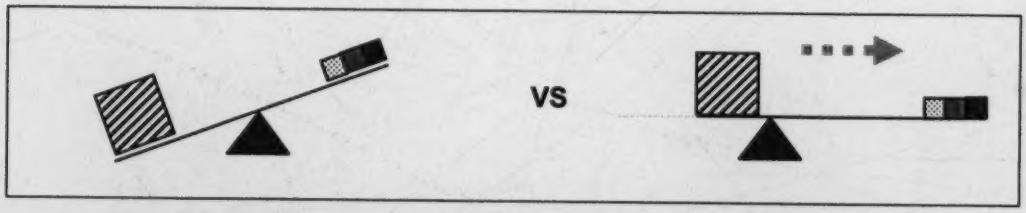


**Fig. 2.7. Manipulation of processes (when and where to engage).** The processes (open houses, workshops, public hearings) are represented by the platform of the balance. Implementing public engagement process to convenience authorities (left figure) prevents processes that are flexible to the space and time constraints of the public. A more cooperative approach would have the processes 'balanced' to accommodate the time/space constraints of the public (right figure).

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# Chapter 3.

## PLACE, CULTURE, AND THE SOCIAL AMPLIFICATION OF RISK[7]

### 3.1 Introduction

Technologies that have contributed to economic prosperity and advancement of human health and quality of life have also brought a myriad of new risks to people's everyday lives. Risks now pervade society in forms as diverse as pollution from toxic waste facilities, electromagnetic radiation from overhead power lines, and accidents from industrial operations. Managing these risks involves using mechanisms to keep the public appraised about the dangers that technologies pose, and formulating subsequent strategies for risk management. Risk communication strategies often play out at the local scale where particular groups may be affected by 'risky' activities. Communication among government authorities, industry, and the public can result in conflict about what are considered to be appropriate decision outcomes and acceptable levels of risk. In this way, risks are now viewed as social constructions – what constitutes danger depends on 'who is talking to whom' (Cutter, 1993; Lupton, 1999). But 'who talks' is often determined by politicized processes that privilege certain forms of 'risk talk' over others. This means that risk talk is cultural, making risk communication a juxtaposition of different ways of making sense of risks. Clarifying the role of culture in risk communication has become a main concern in recent efforts to bridge risk perception research and social context (Pidgeon, Kasperson, and Slovic, 2003). This chapter investigates the role of culture in risk communication through an empirical application of the Social Amplification of Risk Framework (Kasperson, *et al*, 1988). The research draws on qualitative data collected from a case study of an industrial development plan in Alberta, Canada and is informed by social theories of place (Shields, 1991; Cresswell, 1996, 2004). The results show how culture is enacted through contested 'in-place' to influence the social construction of risks as they play out through contested place-making discourses in a social conflict.

### 3.2 Background

Three decades of intense theoretical and methodological debate have led to approaches that investigate how social context is critical to understanding risk (Short, 1987; Wynne, 1992; Rosa, 1998; Wilkinson, 2001). Social context is particularly important because the distribution of risk has become recognized as a key contributor to many social conflicts (Giddens, 1991; Beck, 1992). Where risk perception research traditionally viewed individuals as atomized units unconnected to a social system, we now understand risk as embedded in social context. In other words, risks are situated within the social experiences and interactions of individuals, groups, and institutions

[7] A previous version of this article was submitted to the journal *Risk Analysis* and will be re-submitted.

(Scherer and Cho, 2003). These new approaches have been incorporated into both psychometric (Slovic, 1987, 2000) and cultural theories (Douglas and Wildavsky, 1982; Dake, 1992) and are helping to integrate formerly disparate technical and socially oriented approaches to risk. In particular, the Social Amplification of Risk Framework (SARF) developed by Kasperson *et al* (1988) has attempted to bridge the gap between risk perception research and social context.

Since first proposed in 1988, SARF has been used to explain how social context might influence communication about risk events (Frewer, Miles, and Marsh, 2002; Pidgeon, Kasperson, and Slovic, 2003). In brief, according to SARF, psychological, social, and institutional factors influence risk perceptions and behaviour through a network of socially mediated communication channels. These communication channels can be either formal such as the media, public relations campaigns, and community meetings, or informal such as word-of-mouth interaction within social networks. Of these, the media has been seen to be influential on risk perceptions and therefore has received particular attention (Flynn, Slovic, and Kunreuther, 2001). But in local risk debates, many informal sources of risk perceptions, including individual citizens or activist groups and institutions, can act as crucial amplification or attenuation stations within communication channels in everyday life, receiving and sending risk signals that in turn influence the risk perceptions of others.

The original work on SARF argued that risks have meaning only to the extent that they are a reflection of how people interact within a social context (Kasperson, *et al*, 1988). Since then, phenomenological studies have shown that risk not only reflects social context, but that culture accounts for differences in the ways that risks are communicated, leading to unique outcomes from place to place (Kasperson, 1992; Pidgeon, Kasperson, and Slovic, 2003). As a result, subsequent iterations of SARF have incorporated culture as a super-variable through which risk amplification or attenuation occurs. However, to-date much of the work in SARF associates culture broadly at the national level, or as a synonym for ethnicity. Most recently, case study approaches have begun to support a more nuanced inclusion of culture in SARF (Pidgeon, Kasperson, and Slovic, 2003). For example, Ortwin Renn uses a comparative case study of solid waste incinerator siting proposals in Germany to show how risk amplification and attenuation are deliberate strategies used to influence risk debates (Renn, 2003). He shows that such strategies may be partly mediated by the cultural context in which local actors are situated:

> All actors participating in the communication process transform each message in accordance with their previous understanding of the issue, their application of values, worldviews, and personal or organizational norms, as well as their own strategic intentions and goals. (p. 377)

Case studies such as Renn's provide evidence for the integration of situated cultural variables into mainstream risk theory, pointing to ways in which culture can be operationalized in the local social construction of risk. Further work in this area can illuminate what it is about culture that makes some individuals and groups amplify and others attenuate risks in a given social context. While considerable work has examined

the 'who' aspect of this question (variables such as gender, occupation, age, and so on), as geographers we suggest that the answers may also be found by focusing on 'where'.

Recent developments within the 'new cultural geography' have led to a definition of culture as the social and material processes and outcomes of contested meanings attached to place (Martin, 2003; Massey, 2004). Critical scholars suggest that culture is best understood contextually, as found in the taken-for-grantedness of everyday life (Mitchell, 1995; Cresswell, 2004) as it occurs in-place. Place attachments therefore both reinforce and reflect the social construction of risk in the local environment. Place attachments are associated with family, work, leisure, and the taken-for-granted interactions of daily life (Buttimer, 1993). Tensions, therefore, can manifest in power struggles when a particular place has different meanings to people with different social and cultural affiliations (Martin, 2003). Critical views of place and culture have focused attention on such friction and associated power struggles, including geographies of resistance in social conflict (Cresswell, 1996; Pile and Keith, 1997). Therefore, place can be seen as central to the cultural biases by which people select and interpret risks.

## 3.3 Alberta's Industrial Heartland and the geopolitical context

This chapter is based on a case study of a regional industrial park proposed by local governments near Edmonton, Alberta, Canada and revolves around a public consultation program that took place between 1999 and 2001. The region includes a mix of semi-rural farming and non-farming residents as well as an assortment of petrochemical and other industrial facilities. The purpose of the public consultation program was to inform the community of the proposal to amend zoning of a 194 $km^2$ area to create the *Alberta's Industrial Heartland* (AIH; Appendix A). The proposal was intended to attract large scale investment in the petrochemical industry. Its aim was to build on an existing industrial infrastructure developed over the past half-century. Despite efforts to build community support for the AIH proposal, widespread opposition mobilized against the authorities responsible for the AIH proposal. A grassroots movement called the *Heartland Citizen's Coalition* (HCC) utilized the consultations and local newspapers to air their opposition. Over time, the planning process devolved into a risk conflict between local authorities and concerned landowners. Since then, steady community opposition to the AIH has persisted and the HCC continues to try to resist plans to move ahead.

In many ways, the study area is a microcosm of economic and cultural restructuring taking place in other rural locales (Abraham, 1996; Cloutier, 1996; Gorton, White, and Chaston, 1998; Epp and Whitson, 2001). It provides an excellent example of how risks are playing out in places undergoing social and cultural change as they move away from agricultural land uses toward industrial and other activities (see Chapter 4). The imposition of new forms of risk on local populations has led to risk conflict between industrial proponents and citizens who have concerns around health, safety, and quality of life (Baxter, Eyles, and Elliott, 1999a, 1999b; Wakefield, *et al*, 2001).

In rural communities around the world, local governments have been attracted to industrial development as a means to extend local tax-bases in order to subsidize services and support the regional economy (Dekel, 1994). People with cultural backgrounds based in agriculture have traditionally seen such development as a social and economic opportunity – a means to sustain their way of life through off-farm employment. They support industry as long as it does not impinge on their farming operations (Dekel, 1994). In contrast, more recent non-farming rural residents have arrived in search of a cultural 'countryside' and are motivated by the aesthetic features of the local landscape (Mitchell, 2004). These newer arrivals increasingly view industry as incompatible with rural living, and see industrial development as a threat to nature and the local quality of life (Baxter, Eyles, and Elliott, 1999a, 1999b). As the diversity of groups in these places increases, tensions between 'industrial' and mixed 'residential' cultures become more than simple 'for or against' issues: rather, they are multifaceted and often contradictory (Sullivan, 1994).

At the centre of these multifaceted viewpoints are a myriad of potential risks that are believed to accompany the arrival of further industrial development. Importantly to this case study, perceptions of risks are influenced by past and present experiences with local industry. For example, in August, 2001, an underground storage cavern containing ethane exploded at a petrochemical facility located in the study area, sending up a plume of black smoke that could be seen from over 50 km away (Sturgeon Creek Post, 2001). The explosion and subsequent fire were caused by a structural failure in a pipeline elbow joint, and burned for a total of nine days. The incomplete combustion of ethane caused the release of carbon soot, resulting in some residents reporting respiratory effects. The visibility of the accident, as well as delays by local authorities in providing information to the public, inflamed public concerns about the uncertainty of industrial hazards in the region and reinforced doubt held by some residents about the preparedness of local emergency response systems. Amidst the public outcry in 2001, local authorities tried to provide reassurance that the cavern fire was a low-risk event. While the smoke appeared to be threatening, health and safety experts claimed that there would be no lasting effects on human health (Sturgeon Creek Post, 2001). Despite these measures, many residents of the region remained concerned about health.

The timing of the cavern fire brought industrial risks into clear public view. The fire was a tangible event that conflicted with place attachments among residents who saw the region as safe, clean, and natural. The fire thus served as a lightning rod for growing public critique of the AIH proposal. In policy analytic terms, the cavern fire represented a tipping point for subsequent conflict (Roe, 1994), putting risks to the community at the centre of ensuing public debate associated with industrial development. Most importantly, the public response to the fire revealed an underlying disjuncture in views about appropriate development between local government, industry, and residents.

### 3.4 Methods

This research used qualitative methods to uncover respondents' views about risk and the AIH proposal (Lincoln and Guba, 1985; Hay, 2000). The advantage of using

qualitative methods in risk research is that it allows access to 'culture' to reconstruct situated and negotiated realities of individuals and their experiences of events and processes related to risk debates. Culture is found in attitudes, beliefs, values, and social interactions that influence the articulation of risks associated with a particular development or hazard (Santos and Chess, 2003). Qualitative information is useful in exploring unknown areas of risk theory and developing new ideas about social processes. Through *thick description*, qualitative research can be complementary to traditional quantitative risk research by providing experiential substantiation or offering insight into possible new directions of theories, models, and frameworks (in this case, SARF) (Esterberg, 2002).

Face-to-face interviews gathered in-depth information to understand the social construction of environmental risk perceptions from a cross-section of residents[8] (farmers, acreage owners, subdivision residents) and non-resident stakeholders, including local politicians, administrators, journalists, and industry representatives (Fontana and Frey, 1994). Combined snowball and random sampling (Esterberg, 2002; Creswell, 2003) gained the perspectives of key individuals and ensured representation from the larger community. First, snowball sampling identified key informants who were known to be engaged in and knowledgeable about the AIH proposal and public consultations (n = 10 resident; 10 non-resident interviews). Additional residents recruited by random selection were drawn from municipal land ownership maps (n = 10 interviews; response rate = 70%). This kind of random sample mitigated sampling biases inherent in purposive techniques by seeking out 'non-respondents' or silent voices within the community (Neumann, 2000).

Between January and July, 2003, a total of 33 people participated in 30 initial interviews involving one respondent, and three interviews involving two respondents. In the latter case, although interviews were scheduled with one household member, respondent's partners joined the interview. An additional 14 follow-up interviews conducted later in 2003 and one group interview in early 2004 (group size = 7) confirmed preliminary results and probed further into prominent themes that had emerged in the first interviews. Appendix B reports demographic information for the resident and non-resident subgroups of respondents. More male than female respondents were interviewed (22 versus 11 respectively). Respondents ranged in age from 24 to 82 years, with the majority in their mid-50s and 60s. Occupations included agriculture, homemaking, private sector industry, small business, and government. Most of the resident subgroup had lived in the region for over 10 years, with some as many as 50 years or more. Finally, family income of respondents ranged from Cdn $30,000 to $60,000+.

The sample size was sufficient to achieve a rigourous exploration of theoretical concepts (Lincoln and Guba, 1985). Following accepted qualitative research practice, sampling continued only until the issues talked about by respondents were frequently repeated (termed data saturation) (Hay, 2000). Interviews were held either in respondents' homes or their offices. Interview length ranged from 29 to 120 minutes, averaging approximately 45 minutes in round one, and from 55 to 120 minutes, averaging

[8] Residents were defined as owning homes and/or property in or near region defined as the AIH.

74 minutes in round two interviews. Interviews followed a semi-structured format (Hay, 2000) to ensure consistent coverage of topics across all respondents. Topics related to respondents' knowledge and experiences of community, place, risks and benefits of industry, and future expectations about the AIH proposal (see Appendices C through H). The interview guide included probes to encourage more in-depth dialogue along particular lines of conversation. Beyond this, the semi-structured interview format does not necessarily adhere to strict protocols or question paths. Rather, the interviewer is free to modify the questions being asked, take the conversation down tangents, and discuss seemingly unrelated subject matter, depending on the desire of the respondent (Hay, 2000). The benefit of this type of inductive research method is that it allows unexpected and unanticipated concepts and themes to emerge (Lincoln and Guba, 1985; Hay, 2000).

Interviews were taped, transcribed verbatim, and imported into a qualitative data analysis software package (NVivo™). As interviews proceeded, inductive analysis occurred with an initial round of free-coding of data to establish emergent themes, and then proceeded to build generalized categories as concepts became more concrete with further data collection (Miles and Huberman, 1994). Potential threats to rigour were minimized using accepted strategic measures for ensuring excellence in qualitative methods (Baxter and Eyles, 1997). In a manner that parallels practices that provide validity and reliability to quantitative research, qualitative researchers rely on several measures to enhance credibility (how closely results represent authentic experiences of respondents), transferability (to what extent results can be used in other contexts), dependability (how stable results are consistent over time and space), and confirmability (to what extent results are protected against influence of biases of the researcher) (Baxter and Eyles, 1997).

A common strategy traditionally employed for qualitative data analysis involves the independent confirmation of coding frameworks by two or more independent researchers (termed 'inter-rater reliability'). While there has been debate around inter-rater reliability, recent critiques have resulted in a growing number of qualitative practitioners choosing not to employ such techniques (Armstrong *et al*, 1997; Morse, 1997). Critics are concerned that inter-rater reliability fails to accomplish what it sets out to do on both logistical and epistemological grounds (Armstrong *et al*, 1997; Morse, 1997). This study instead employed a set of data quality control measures including: (1) multi-method sampling (described above) to ensure that perspectives of both active and inactive community members were obtained; (2) pilot testing of interview guides so that questions were appropriate and easily understandable; (3) member-checking of interview transcripts to confirm accuracy of data with respondents; (4) follow-up interviews and prolonged (approximately one year) immersion in the fieldwork to establish rapport and confirm interpretations; and (5) a community advisory committee, which checked the results against all four criteria for qualitative rigour. Finally, respondents' confidentiality was safeguarded in the reporting of project results.

## 3.5 Results

The empirical findings are organized around four themes based on 11 emergent themes developed from risks perceptions related to the AIH proposal. The four themes represented social constructs that emerged out of the dataset of round one interviews[9] and represented risks to: (1) life, (2) home, (3) prosperity, and (4) community. Table 3.1 presents the 11 emergent themes by relevance to each of the four social constructs. Frequency counts of the data indicate which themes were more prominent topics during the interviews. First, the total number of interviews in which each theme occurred provides insight into its pervasiveness in local discussions about risks. That more respondents talked about a particular type of risk suggests that it has been important part of the debate around the AIH proposal. Second, the total number of mentions of each theme in all interviews point to risk perceptions that at least some respondents talked about multiple times in the round one interviews. That a certain respondent more frequently discussed particular risk perceptions means that some aspects of risk were especially important to him/her. It should be cautioned however that while prevalence is often a good indicator of the importance of a particular theme, it does not necessarily discount less frequently mentioned themes (Baxter and Eyles, 1997). Rather, each theme carries unique insights into views about individual's risk perceptions. A theme with few mentions may provide valuable perspectives into a social phenomenon that are not readily recognizable or commonly known in the wider social context of the risk debate.

The frequency counts also facilitated comparison of risk perceptions across the four social constructs. While the data show that risks to life are the most often discussed construct (194 mentions), risks to other aspects of everyday life were also important to respondents. These included risks to home (124 mentions), prosperity (84 mentions), and community (35 mentions) which collectively accounted for more than half of the themes mentioned (243 out of 437 mentions). The breadth of risk perceptions across social constructs indicates that respondents recognized the broader dimensions of risks stemming from the AIH proposal. This broader view means that the AIH proposal was not only seen as a threat just to life, but also a threat to 'ways of life'.

### 3.5.1 Social constructs and themes

*Life*

The first social construct centred on the impacts of intensified industrial activity to life. On one side, the prospect of industrial accidents evoked concerns about the potential threats to the lives of respondents and their families, and on the other side, assurances about the effectiveness of regulations to mitigate hazards. A total of 194 mentions among three themes ('danger', 'health', 'safety') made risks to life the most widely talked about social construct in the results. The most prominent theme ('danger') centred on the threat of living in close proximity to industrial facilities (23 interviews;

[9] Round two and focus group interviews were used to confirm existing themes and are not employed in the quantitative reporting of this analysis.

100 mentions). Dangers were viewed in a spatialized sense: proximity to industry transformed the region from a 'safe' place to live into a 'risky' place. Respondents linked personal experiences with chemicals, noises, fires, and explosions with fears about increased hazards that would accompany further industrial development. Among these, the cavern fire figured prominently for Fred as an example of the inability of emergency response systems to manage risks:

> *[Emergency response] wasn't very well handled, the EMS people in the counties, in the city of Fort Saskatchewan did a very poor job, notifying us about what was going on... the RCMP came and told us to get out of here, there could be real problems. I said, well I live right over there. She said, "well if I was you, I'd go to Edmonton for the day".* (Fred, retired subdivision resident; 003)

In a related theme ('health'), respondents recognized the long term health effects of industrial activities, especially among people who lived downwind from airborne industrial emissions (18 interviews; 67 mentions). Health concerns ranged from increased cases of asthma and other respiratory illness, to cancer and uncertain neurological disorders associated with pollution. For evidence of these effects, respondents like Richard pointed to visible indicators on the local landscape such as smog, residues, rusting metal, and animal health:

> *We really don't know how bad the pollution is. I mean there's talk of increased cases of asthma and you hear lots of horror stories about specific examples of people with respiratory problems so bad they can't really live in that area. And not specifically [human health, but] cattle are getting sick and aborting.* (Richard, retired farmer; 001)

In contrast to the threats to life represented by the danger and health themes, respondents emphasized a third theme ('safety') focused on the success of industrial operations in preventing accidents and ensuring public safety (15 interviews; 27 mentions). In opposition to what others said, respondents such as Ben thought industry has done a good job in employing technologies and regulations to manage risks:

> *And I can say over the past 35 years, industries have improved. Their technologies have improved, their processes have improved, they've become more environmentally conscious.* (Ben, elected official; 026)

These reports on safety focused on monitoring, research, industrial operations, and hazard management that 'normalized' visible signs of industry with assurances about the effectiveness of emergency response. Brenda recalled her assurance that local authorities had the cavern fire under control as she went about her routine daily activities:

> *I remember the morning [of the fire] we were going to church and I saw this huge black plume, so we went for a ride. Of course the RCMP had the roads blocked. They said it's a fire but it's not out of control. It's under*

*control. OK. Nobody was injured. Everything was fine. Trucks are there. Fine. I went home and made breakfast.* (Brenda, municipal civil servant; 022)

*Home*

The second social construct centred on the impact of industrial intensification on the homespace of the rural countryside. A total of 124 mentions among four themes ('rural idyll', 'heritage', 'geography', 'employment') reflected how industry might threaten or benefit experiences of home. In the first theme ('rural idyll'), respondents relayed concerns about the negative image that industrial encroachment imposed on the aesthetic features of the countryside (18 interviews; 51 mentions). According to this theme, industrial nuisances such as traffic, noise, and smells disrupted the peaceful serenity of living the country life. This theme was especially important to respondents like Janet who lived on acreages and in rural subdivisions:

*And we bought the property with the idea that we would be involved with nature, away from noise and pollution. We're very much environmentalists ourselves, and very involved in bird watching and camping and canoeing. We really like the outdoors, so we hoped this would be a special place for us to retire in, but it hasn't turned out that way.* (Janet, retired acreage owner; 017)

For the farming community, attachment to home went well beyond the aesthetic pleasures of country living. The second theme ('heritage') emphasized the attachment to a lifestyle that was associated with the long term tenure of the region's agricultural community (11 interviews; 27 mentions). Many farmers in the region had roots dating back to 19$^{th}$ century homesteaders, with lands passed down from generation to generation. To Greg, the AIH proposal represented the 'last straw' of a continuing economic transformation associated with the replacement of agriculture with other economic activities over the past several decades:

*I've lost my motivation. And that's the hard part. It almost brings tears to my eyes that some place that my grandparents worked so hard for, and passed on from generation to the next generation, that I'm just going to abandon it.* (Greg, farmer; 004)

As under the life construct, not everyone agreed that industrial intensification was inherently threatening. In contrast to the views of the rural idyll and heritage, some respondents saw the area as a 'home' to industry – in particular because of local geographic characteristics and potential employment opportunities. Some respondents acknowledged that features of the physical and social landscape ('geography') were considered to be an asset not only to the region, but the province as a whole (24 mentions; 15 respondents). For them, industrial development 'made sense' based on the region's advantageous physical, economic, and social resources. The availability of low cost petrochemical feedstock, land, water, existing industrial infrastructure, an educated

workforce, and a pro-business political climate made the region an attractive place to invest. The region is located at a latitude with a relatively cold climate and has large salt caverns in the subsurface, making it ideal for the storage of a variety of petrochemical products (AIHA, 2002). Infrastructure (e.g. rail, pipelines) has developed alongside industry and provides incentives for further industrial development. For Brent, these attributes, in conjunction with the adoption of an eco-industrial planning philosophy (Frosch, 1992; Ayres and Ayres, 1996; AIHA, 2002), seemed to justify further industrial development:

> *I think there's only one [issue], and that's pack it [with industry]. We have the infrastructure set up in this west end of the county. And the infrastructure I'm referring to is the water, the gas, the railways, and power. We have all that in place for it.* (Brent, elected official; 025)

One selling point for AIH promoters was the idea that the AIH would create a real estate market for current residents. They argued that increased employment opportunities would draw people to the area, creating a housing demand and pushing up home prices. The belief was that residents no longer comfortable with nearby industry would sell their homes to future employees who would want to live close to their new place of work (AIHA, 2002). When asked about this strategy, Erik was sceptical that anyone would want to invest in his property:

> Interviewer: *I have read that they say that one possible solution is that with all this industrial expansion there'll be people that work for industry who will want to buy these houses to be close to industry. Do you think that's a realistic solution?*
>
> Erik (acreage owner; 016): *Well, would you put money into a house that sits on land that any time can become industrial land?*

The fourth theme ('employment') centered on reports of the long-term dependency of farmers on work in local plants. These respondents were optimistic that the AIH would be a 'land of opportunity' (14 interviews; 20 mentions) for residents of the region. Industry would allow farmers to 'stay home' rather than be forced to find off-farm work outside the region. According to Nick, the community should understand and accept the consequences of the local industrial economy because the benefits outweighed any potential risks:

> *Well, you can't have everything. You got to put up with some of those things if you want to benefit. I worked [in industry] for 10 years, and they treated me pretty good, and I got no complaints about them. [Industry] does the best they can, and the communities benefit from it considerably. So what more do you want?* (Nick, retired farmer; 006)

*Prosperity*

The third social construct provided an economic perspective on the AIH proposal. Respondents recognized that the AIH, if implemented, would result in a gradual shift from agricultural and residential to industrial land use over the course of several years or decades. A total of 84 mentions in two contrasting themes ('stigma', 'economy') dealt with economic risks and benefits of the AIH's proposed industrial growth strategy. In the first theme ('stigma'), respondents recognized the potential for pollution to affect agricultural productivity and property values. This led to a sense of worry about personal economic wellbeing (16 interviews; 38 mentions). For farmers, this focused on anxiety about the economic viability of agriculture in general. For example, Gerry was concerned that airborne emissions would threaten his ability to retain organic certification for farming operations:

> *If a farmer can be a certified organic farmer, and then somebody'll come along and say, "Okay, I want to test your land for these chemicals," and there may be traces of [pollutants]. There's nothing that you can do, because the land that we live in has this pollution everywhere.* (Gerry, farmer; 005)

Likewise, industrial stigma associated with both pollution and the reconfiguration of land from residential or agricultural to industrial led to concerns about property values. The real estate market depended on the aesthetic features of the natural setting of the river valley in which many residential properties were located. Since industry impinged on the natural setting of these properties, respondents like Erik felt that its resale potential would be constrained to an industrial market, where it may take years to find a buyer:

> *What we are afraid of now is that when the time comes that we have to move, that suddenly we find we have no buyer for our land. And I will not find a buyer in any event because of the new land use law. I must say it has become worthless. If the time comes that we have to move the only alternative we have now is to get off the land, board the house up or dismantle it, and hope that at some future day the land will be sold to industry. I don't think it will be sold in the next few years, it probably won't be sold in a decade or two.* (Erik, retired acreage owner; 016)

In contrast to concerns about stigma, some respondents chose to emphasize the regional advantages that might accompany the AIH proposal ('economy'; 18 interviews; 46 mentions). Spin-off benefits for local businesses provided a strong incentive to foster industrial investment in the region. Some respondents like Cory also recognized the political capital to be gained from a robust local economy:

> *If you're working at the Tim Horton's for six bucks an hour, and the more people we have drive through the city, the more hours I'm going to get and the more money they can pay me. And to go right to the other end, if you're the City Manager of Fort Saskatchewan, the more industry I can*

*attract here and the bigger I can grow the city, the more money I'm going to make and the better it's going to look on my resumé.* (Cory, elected official; 020)

*Community*

The final social construct identified by respondents related to the idea of community sustainability. A total of 35 mentions in two themes ('marginalization', 'philanthropy') offered contrasting views of the future social impacts of industrial intensification on the region. Importantly, both themes carry a different definition of community. These different definitions coincided with whether respondents viewed industry as a risk or benefit. In the first theme ('marginalization'), respondents emphasized the local residential communities located within the AIH boundaries. Respondents thought the AIH proposal had forgotten about the 'little person', leaving local community members on the periphery of decision-making (8 interviews; 11 mentions). For Gerry, authorities' emphasess on the economic aspects of industry at the expense of community concerns fostered resentment:

*[Authorities] do everything for the mighty buck, there's no doubt about it. I don't think they concern themselves with doing things for the benefit of the whole community. They locate where it is the best for them, and without a concern for the people that it affects.* (Gerry, farmer; 005)

In contrast, the second theme under the community construct ('philanthropy') defined community much more broadly. It emphasized a wider community encompassing the entire regional population (13 interviews; 24 mentions). Respondents like Dana suggested that the regional 'community' had been strengthened by the multitude of charitable acts done by industry over the years. As such, to complain about any risks that accompany industry is to 'bite the hand that feeds you':

*[Industry] has done, as far as I'm concerned, an exceptional job supporting the community. Putting dollars back into the community. In community projects, and recreation projects, and tons of money. Computers to the schools. They've spent a lot of money. There's been a lot of money back into the community* (Dana, municipal civil servant; 019)

Together, the four social constructs show that risk perceptions shape several layers of life and develop through complex and contested interpretations of the positive and negative impacts of the AIH proposal. Because of the diversity in respondents' views, the issues of concern cannot be interpreted as simply 'for' or 'against' the AIH proposal, but must be seen in the light of a complex, multifaceted juxtaposition of perspectives.

### 3.5.2 The social amplification of risk in the AIH

Further analysis of the 11 emergent themes above provides insight into the relationship between risk perception, culture, and the social amplification of risk. Table 3.2 groups the themes according to whether they represent high or low risk perceptions to life, home, prosperity, and community. Six of the themes reflected high risk (danger, health, rural idyll, heritage, stigma, marginalization; 294 mentions). Risks to life included industrial accidents that could harm people living near plants. Risks to home included unsightly industrial activity that could upset 'country living'. Risks to prosperity included the impacts of pollution and rezoning on property values. Finally, risks to community marginalized residents living near industry for the benefit of the wider population.

In contrast, five of the themes represent low risk perceptions (safety, geography, employment, economy, philanthropy; 139 mentions). These themes emphasized respondents' views that industrial development was not only a low risk, but also a potential benefit to the region. Risks to life were minimized with assurances about the safety of industrial operations. Risks to home were discounted by a rationale that industry would create a 'land of opportunity' where people who wanted to leave could easily benefit from the influx of workers who would want to live close to work. Risks to prosperity were countered by economic benefits of industry in the form of employment opportunities and spin-offs to local businesses. Finally, risks to community were dismissed by pointing to the philanthropic contributions industry makes to local sports, culture, and quality of life.

*Risk amplification and attenuation*

The results show that risk perceptions were not isolated within the minds of individuals, but manifested as threats to shared 'ways of life'. In other words, risks were carried through social networks via communication channels (e.g. public meetings, newspapers). In this way, individual risk perceptions fed into a community sense of 'riskiness' (Driedger, *et al*, 2002). Social constructions of life, home, prosperity, and community framed discussions of industrial development, pitting concerns about risks against assurances about the benefits of industry. In the interviews, respondents identified specific ideas or events, using either high or low risk perceptions to contribute to risk amplification or attenuation. For example, respondents communicated contrasting risk perceptions when considering the potential for a major industrial disaster. On one side, some like Cory had faith that the emergency response efforts were sufficiently equipped to mitigate any circumstance, no matter how remote:

> *There's so many safety precautions and checks and balances in there that the chances of having something that catastrophic happen...definitely there's a greater chance of getting hit by a car or struck by lightning or whatever.* (Cory, elected official; 020)

On the other side, respondents like Fred recounted stories based on past experiences of similar types of disaster and the potential for such events to occur again:

*On one occasion, a propane tank truck caught fire on the road [in the AIH]. I don't know if you've heard of a "BLEVE", a BLEVE is a boiling liquid expanding vapour explosion. [A BLEVE] happened in 1983 down in Illinois. A propane tank car caught fire. When the car exploded, the tank car flew 3330 feet. The burn area from the fire was a thousand feet. We've got these types of cars and products 30 metres from our house, and I don't need more of it.* (Fred, rural subdivision resident; 003)

Importantly, all of the discourse around risk and decision-making, including that of authorities, centred on heuristics that were not based on absolute or quantitative risk evaluations. Rather, they were generated by underlying cultural worldviews in favour of or against the AIH proposal. In a circular and reinforcing manner, worldviews influenced a particular risk perception and that perception served to reinforce and legitimate the pre-existing worldview. In this way, the same risks were amplified as 'riskier' by some respondents and attenuated as 'less risky' by others in accordance with pre-existing perspectives.

*Who amplifies, who attenuates?*

The next step in the analysis sought to identify patterns of residents' and non-residents' risk perceptions. Figures 3.1 and 3.2 present total frequency counts of high and low risk perceptions charted for residents and non-residents respectively[10]. In both Figures, high risk perceptions appear as positive frequency counts (dark grey bars) and low risk perceptions as negative frequency counts (light grey bars). Not unexpectedly, the results show a clear difference between residents and non-residents.

Figure 3.1 lists each resident from highest to lowest frequency count of high risk perception mentions/interview. For example, Fred (rural subdivision resident; 003) mentioned 41 incidents of high risk perceptions and zero of low risk perceptions. Within this group, 14 out of 18 residents/couples[11] were categorized as 'risk amplifiers', reporting substantially more high than low overall risk perceptions. Among the fourteen risk amplifiers in Table 3.2, high risk perceptions were reported an average of 18 times per interview, versus only three mentions of low risk perceptions. Importantly, Figure 3.1 also reveals that acreage owners (listed as 'A') and residents of subdivisions (listed as 'S') almost consistently reported high risk perceptions more frequently than farmers (listed as 'F'). The only exceptions included Greg (#004) and Gerry (#005), both of whom were not primarily farmers by occupation. The difference between farmers and non-farmers may be explained by the closer interdependency between farmers and industry and shows that country residents saw industry as a greater threat than did farmers. This disjuncture is consistent with literature documenting the transformation of traditionally agricultural regions via the influx of incomers yearning to escape from 'urban' problems (pollution, noise, traffic, crime) in the countryside. These newcomers are recognized as being less tolerant of intrusive activities such as industry (Baxter,

[10] Respondents were separated based on the groupings in Appendix B.

[11] Because the three interviews of couples were coded together, they are grouped together in this analysis

Eyles, and Elliott, 1999a, 1999b; Kaplan and Austin, 2004; Mitchell, 2004). The finding also supports the idea that risk perceptions were not based solely on the location in which people lived, but on more complex cultural experiences related to how people were attached to place.

Figure 3.2 lists non-residents from highest to lowest frequency of low risk perception mentions/interview. Within this group, seven out of 12 non-residents were categorized as 'risk attenuators', reporting more low than high risk perceptions. Among the seven risk attenuators, low risk perceptions were reported an average of nine times per interview, versus only two mentions of high risk perceptions. Notably, the seven risk attenuators each had vested political interests related to industry, occupying positions in local governments that were responsible for carrying out the AIH proposal. Among these, three respondents stood out as 'strongly' risk attenuating (respondents #026, #020, #028). These three officials were all more closely affiliated with industry either as a result of political affiliations or direct involvement in the planning of the AIH proposal.

Notably, the average frequency count of high risk perceptions among the fourteen risk amplifiers in Figure 3.1 ($\bar{x} = 18$) doubles the average frequency count of low risk perceptions among the seven risk attenuators in Figure 3.2 ($\bar{x} = 9$). The disparity in the strength of risk perceptions suggests that residents on average were stronger in their reports of risks than non-residents. With the exception of the three 'strong' risk attenuators, non-residents tended to talk less about risk perceptions from a broad perspective with a more balanced view between high and low risks.

Furthermore, within-group trends of residents and non-residents can be interpreted as resulting from, and contributing to, shared risk perceptions within each group. In SARF, individuals, groups, and institutions can act as amplification or attenuation stations by sharing risk perceptions within social networks. Whether individuals will amplify or attenuate risks, then, depends on their cultural worldviews, which in turn are influenced by the social network in which they are situated. Risk amplifiers mainly included residents whose worldview was based on place attachments to farms and acreages, as well as personal livelihood in the countryside. Residents' worldviews were perceived to be under threat from the prospect of industrial encroachment that would accompany the AIH proposal. Amplification stations could therefore include a group of residents communicating with each other through newspapers or informal social networks to spread word about their concerns and actions. For example, the HCC formed out of informal networks built among concerned residents who rallied neighbours who lived within or nearby the AIH designated boundaries. Members of the HCC such as Rachel reported that they communicated regularly with neighbours by telephone, in groups, and in public meetings about their concerns:

> *I felt some responsibility in the community to inform the community. I mean, it was important. I felt that the neighbors should know. So that's what I spent most of my time on, is going out to the public. Trying to inform people. I made a lot of phone calls.* (Rachel, rural subdivision resident; 029)

In contrast, risk attenuators included mainly non-residents whose worldviews derived from political or economic motivations related to their jobs or positions in government. Non-residents' worldviews were at a scale that encompassed the wider constituency of their respective municipalities or businesses. According to this worldview, industrial development would be good for the regional economy, serving the interests of all citizens of the four municipalities. Attenuation stations could include groups of officials and industrial representatives who came together in meetings whose sole purpose was to move forward on the AIH proposal. For example, the AIH steering committee (of which several of the non-resident respondents of this study were members) acted as an attenuation station by communicating the benefits of the AIH proposal through promotional materials, newspaper advertisements, and during public meetings. According to Brent, this committee was responsible for directing the coordinated development and promotion of the AIH proposal to serve the interests of like-minded organizations:

> *[The AIH Directors] were involved, the government was involved, the federal government was involved, the provincial government, they were all involved in that. They were at our meetings. We're happy that's the process we used. And we give them the information. They had an opportunity to review it, and come back to us, and tell us what they think it was. And that's the route we took.* (Brent, elected official; 025)

Lastly, it is important to note that several respondents reported risk perceptions that contradicted the resident or non-resident group to which they belonged. Among residents, these included respondents #006, #015 (equal high and low risk perceptions) and #012 (more low risk perceptions). Two of these respondents were retired farmers and one was a spouse of a now deceased farmer, all of whom reported having depended on industry at some point in their lives to help sustain the family farm income. This dependency may have influenced views of the role of industry, leading to lower risk perceptions. In the interviews, respondents like Gus believed that farmers generally supported the AIH proposal as they were convinced that the greater good of the local economy outweighed the concerns of other residents:

> *In the agricultural community they have been more ready to accept industry and not question the environment in which they live. As readily as people who live in multi-developed subdivisions who have come out of Edmonton.* (Gus, elected official; 023)

Exceptions in the non-resident group included respondents #022, #027 (equal high and low risk perceptions), #019 and #024 (more high risk perceptions), and #014 (neither high nor low risk perceptions). These respondents included former officials and industry representatives who were not directly involved in the planning of the AIH proposal or who had ties to the local communities through other political or social avenues. In the interviews, these respondents came across as nonaligned in the debate.

Like Jeremy, their risk perceptions arose in relation to being sympathetic to community concerns:

> *From my standpoint, when I drive down this road and I go all the way to Fort Saskatchewan with Dow there on the roadside, knowing what I know about the industry, and seeing all the things coming up from the plant, I'll be honest, I wonder sometimes, myself. So why should we expect any more sympathy and understanding from the public when they have even less knowledge than ourselves?* (Jeremy, industrial representative; 027)

Together, these exceptions suggest that concern about risk is more complicated than 'just' being a resident or non-resident. The overall trend suggests that risk amplification and attenuation depends on experiences related to cultural worldviews that are underpinned not only on one's own place attachments, but others as well. Whether respondents amplified or attenuated risks depended on whether they saw the region generally as a place to live, or as a place for economic progress.

In sum, the results suggest that risks are based on beliefs about what constitutes a threat not only to life but also to home, prosperity, and community. As such, risks such as those surrounding the AIH proposal cannot be quantified or simply reduced to a probability of injury or death, but must be understood in the context of all aspects of everyday living. Furthermore, risks are situated at the intersection of competing views about whether the region is suitable or not suitable for industry.

## 3.6 Discussion

This research set out to improve our understanding of the cultural super-variable within the Social Amplification of Risk Framework (SARF). Contemporary understandings of culture see it as a complex political process through which meaning is constructed and negotiated (Duncan and Ley, 1993). For example, critical cultural geography identifies culture as politics by another name (Mitchell, 2000). By this definition, culture is complex and contested, bounded in place as the enactment of everyday life. The AIH case study provided the route to access risk meanings through the everyday lived experiences of people participating in risk communication within the context of a public consultation program. Qualitative analysis showed that risks formed through four social constructs that encompassed aspects of risks related to life, home, prosperity, and community. Further investigation revealed that risk perceptions were shaped by place attachments and related to worldviews. Respondents interpreted risks through the context of a 'safe place' or a 'place for development', depending on whether they communicated from the perspective of the local resident community or the wider economic wellbeing of the region. The centrality of place in framing respondents' discussions about risk provides a way to operationalize culture in SARF.

### 3.6.1 Place and risk theory

The role of place in culture has implications for the spatial articulation of risk theory (Cutter, Hodgson and Dow, 2001; Cutter, Boruff, and Shirley, 2003) which emphasizes the situated experiences of risk in people's everyday lives. Recent advances in social theory of space and place understand that space is not just a passive container, but an active dimension of social relations (Lefebvre, 1991; Gregory, 1994; Soja, 1996). Space is a social agent that acts together with culture to create places that are "actualized and endowed with meaning" (Shields, 1991; p.64). Places are thus created based on common understandings of what does or does not 'belong' (Cresswell, 1996). In the case of the AIH, worldviews related to the local resident community versus the broader municipality related to conflicting place attachments between residents and government officials (Phillips, 1998).

The importance of place depended on the scale of worldviews in relation to the risks and benefits of the AIH proposal. Risk amplifiers saw the AIH proposal in the context of an 'insider's' place attachment that was based on lived experiences – industrial encroachment was seen as a threat to the 'lived-in' places in which people carry out their lives. This group tended to include those people with strong emotional attachments to home and local community as a 'safe place'. When faced with what they viewed as an inappropriate intrusion on home life and personal livelihood, residents came together to form the HCC. The HCC provided a means to express opposition to the AIH proposal through the collective communication of high risk perceptions and an attempt to deter public acceptance of industrial intensification.

In contrast, risk attenuators saw the AIH proposal in the context of an 'outsider's' place attachment that was based on a commitment to economic progress. Respondents who were outsiders to the local community[12] viewed industrial development as an opportunity to create an 'industrialized' place that would be a boon to the entire region. This group tended to include authorities who had a vested political attachment to serving the wider community as a 'place for development'. An eco-industrial park centred on petrochemical manufacturing would create employment opportunities and business spin-offs for the entire region. In their effort to promote the AIH to the general public, these people established formal institutions (e.g. the Association, Steering Committee). These institutions subsequently implemented a strategy to communicate the benefits of industry and provide assurances about risk management that would convince the local population of the virtues of the AIH proposal (see Chapter 2).

During the consultations, it became clear that many residents disagreed with the pro-industry perspective. For example, many residents distrusted expert claims about safety and environmentally conscious approach that the AIH proposal offered to them. Exceptions to this opposition were either few and far between, or silent during the public consultations and to this study[13]. Likewise, supporters of the AIH proposal discounted high risk perceptions as scientifically unfounded and based solely on the vested interests

[12] but perhaps insiders to the wider municipality at-large
[13] Although the potential for this was mitigated by the random selection process

of selfish landowners. These contrasting viewpoints were communicated in public debates where they came face-to-face in efforts to define the region as a place for home or a place for industry. On the surface, the debates were around perceptions of the risks and benefits of the AIH proposal. However, at a deeper cultural level, this debate represented competing definitions of place.

### 3.6.2 Place and power

Power is implicated in the equation between place, culture, and risk communication. Risk communication can become a focus for power relationships among social groups as contested places become imbued with a dynamic and evolving mix of risk perceptions (Covello and Johnson, 1987; Cresswell, 1996; Phillips, 1998). Whose risk perception becomes the accepted view depends on power relationships. Groups in positions of power are able to exert enough influence to make 'their' place within a particular social setting. Likewise, people in disadvantaged positions can gain power through aligning with others who desire similar outcomes (such as the group of residents who formed the HCC). Rachel, who was particularly active in mobilizing landowners to oppose the AIH, put it best:

> *We felt that something dear to us was under attack. Our homes, our hopes, our dreams, our lifestyle, our health, everything that's very dear to us was in a state where we could lose. So I think we had to reach out to each other and see if our neighbours felt the same way as we did. And people were very concerned and so I think that we built a relationship around that and we wanted to work together. And so we found a lot of commonalities.* (Rachel, rural subdivision resident; 029)

Rachel's involvement in coalescing residents around concerns about risks is instructive to the role of power in risk communication. While authorities were invested with the legal and regulatory power to make policy decisions in favour of industrial development, this power did not go unchallenged. The subsequent controversy over risks and benefits of the AIH made risk communication a political process that pitted one group against another in a power struggle to define 'place'.

### 3.6.3 Bringing Place to SARF

The original impetus of SARF was to bridge the gap between technical concepts of risk and the social, cultural, and individual response structures that shape public experiences of risk. Place is an important part of culture that bridges that gap. Geographers in particular have given explicit attention to local social and cultural geographies in the examination of risk perceptions (Baxter, Eyles, and Elliott, 1999a, 1999b; Bickerstaff and Walker, 2001; Garvin, 2001; Wakefield, *et al*, 2001; Luginaah, *et al*, 2002; Cutter, Boruff, and Shirley, 2003). Case studies such as this one have provided evidence that risks are socially constructed according to a complex array of localized factors specific to particular places. This research has built on earlier work in cultural

theory that has sought to understand how differences in risk perceptions can block effective communication. According to Covello and Johnson (1987):

> We can see how people from different organizational and institutional contexts may talk past each other because they maintain different culturally conditioned perceptual filters. These admit concerns relevant to their day-to-day experience, while blocking those ideas that are irrelevant or would place obstacles in the way of their daily lives. By making the basis of this disagreement explicit, we might alert policy makers to unforeseen problems before they become political crises as well as suggest some new approaches to their solution. (p. 21)

Examining risk from a spatialized perspective helps to make disagreements explicit. A place sensitive application of SARF shows how place, risk, and power operate in the culture of local risk conflict to explain how people talk 'past' each other. Understanding how culturally derived worldviews are implicated in place attachments sheds light on the operation of culture in risk communication.

This perspective shows how residents, when faced with an alternative industrial vision for the landscape, amplified risks to defend their view of place. Risk amplification occurred on the basis of place attachments embedded in family, tradition, and a rural idyllic lifestyle. This process created an idealized residential place where industrial intrusion was not welcome. Ironically, subtle differences between agricultural and post-agricultural rural residents were also contentious (Salamon and Toratore, 1994; Sharp and Smith, 2002). Incompatibilities between agricultural practices (e.g. pesticide and manure use) against the desire of country residents to have a high environmental quality of life were divisive issues among respondents in this study. Despite such tensions, these two groups appeared to have aligned their positions in ways that mutually amplified the risks of industry.

In contrast to residents, risk attenuators emphasized the suitability of the region for eco-industrial growth and development. With a focus on development and risk management, the AIH proposal attempted to create a sense of place based on industrial investment and productivity. The decline of agriculture as the dominant economic driver exposed the region to new development initiatives. The AIH proposal set the stage for one iteration of a longstanding debate between rural landowners and industrial developers that collectively make up the changing rural identity of much of the North American West (Salamon and Toratore, 1994; Singelmann , 1996; Winson, 1997) (see Chapter 4).

## 3.7 Conclusion

This research has contributed to the Social Amplification of Risk Framework (Kasperson *et al*, 1988) by showing how risk communication is a cultural process that operates in place. The AIH proposal was conceived as a means for local governments to control the direction and benefits of future petrochemical industrial development in a specific region in Alberta. However, over time, it became much more than that. By

creating a forum for public consultation, authorities transmitted the inherent dangers and uncertainties associated with industrial development (e.g. pollution, industrial accidents, risks to quality of life) into the public arena. In a community previously sensitized to industrial risk, and with a distrust of local risk managers, the public consultation program effectively provided a venue for risk debate and controversy. The result was the social production (and amplification) of risk. Underlying this controversy were competing 'places' grounded in deeply held cultural worldviews of residents and non-residents.

It is worth reiterating that risk amplification and attenuation are not mutually exclusive. To categorize people as exclusively 'risk amplifiers' or 'risk attenuators' runs the danger of oversimplifying social processes. The perspective of place in this study resists this temptation by recognizing that the cultural landscape is complex, and often contradictory. Despite the necessary simplifications taken for the purpose of analysis, it has provided empirically robust evidence for the validity of case study approaches in advancing the linkages between risk and place that constitute one part of the cultural component of the Social Amplification of Risk Framework.

Further case studies that explicitly incorporate place may play an important role in further elucidating the cultural 'super-variable' in SARF and help to strengthen our understanding of the links between risk perceptions and social context. The work presented here identified distinct patterns of risk perceptions that were mediated by place attachments. Future studies can include place attachment as a constitutive variable among factors that influence the amplification and attenuation of risk (e.g. gender, age, socioeconomic status). Such studies should include quantitative models that will help to elucidate the mechanisms within which place operates in local contexts. According to Rob Shields (1991), "Spatialisation (sic)...plays an important role in social causality and should be incorporated into social science discussions of cause and effect" (p. 261). A quantitatively determined incorporation of place would be a helpful contribution to risk communication research because, to this point, place theory has been largely overlooked as a constitutive variable of the social context of risk.

**Table 3.1. Emergent themes from round one interviews (n=30).**

| Social construct | Emergent Theme | Definition | # Interviews occurred | # Mentions in all interviews |
|---|---|---|---|---|
| **Life** | *Danger* | Industry transforms the region as a 'safe' place to a 'risky' place. | **23** | **100** |
| | *Health* | Health is threatened by pollution associated with industry. | **18** | **67** |
| | *Safety* | Risks are managed by improvements in industrial practices. | **15** | **27** |
| | | | **TOTAL** | **194 mentions** |
| **Home** | *Rural idyll* | Industry upsets 'country living' – a pace of life removed from urban problems and in greater connection with 'nature'. | **18** | **51** |
| | *Heritage* | Industry threatens traditional, familial roots with the land and the agricultural community. | **11** | **27** |
| | *Geography* | Attributes of the physical landscape provide incentives for further industrial development. | **15** | **22** |
| | *Employment* | Employment benefits outweigh risks. | **14** | **20** |
| | | | **TOTAL** | **124 mentions** |
| **Prosperity** | *Stigma* | Farming practices and property values threatened by the stigma associated with industrial presence. | **16** | **38** |
| | *Economy* | Potential gains in property values from industrial development speculation. Industry has spin-off benefits to local businesses and politicians. | **18** | **46** |
| | | | **TOTAL** | **84 mentions** |
| **Community** | *Marginalization* | Increased regional focus on industry leads to marginalization of the local community. | **8** | **11** |
| | *Philanthropy* | Industry supports the wider population through its philanthropic and economic activities. | **13** | **24** |
| | | | **TOTAL** | **35 mentions** |

**Table 3.2. The 11 emergent themes grouped by high and low risk perceptions across the four social constructs.**

| Risk perception | Social construct | Theme |
|---|---|---|
| **HIGH** | Life | *Danger* |
| 294 mentions | | *Health* |
| | Home | *Rural idyll* |
| | | *Heritage* |
| | Prosperity | *Stigma* |
| | Community | *Marginalization* |
| **LOW** | Life | *Safety* |
| 139 mentions | Home | *Geography* |
| | | *Employment* |
| | Prosperity | *Economy* |
| | Community | *Philanthropy* |

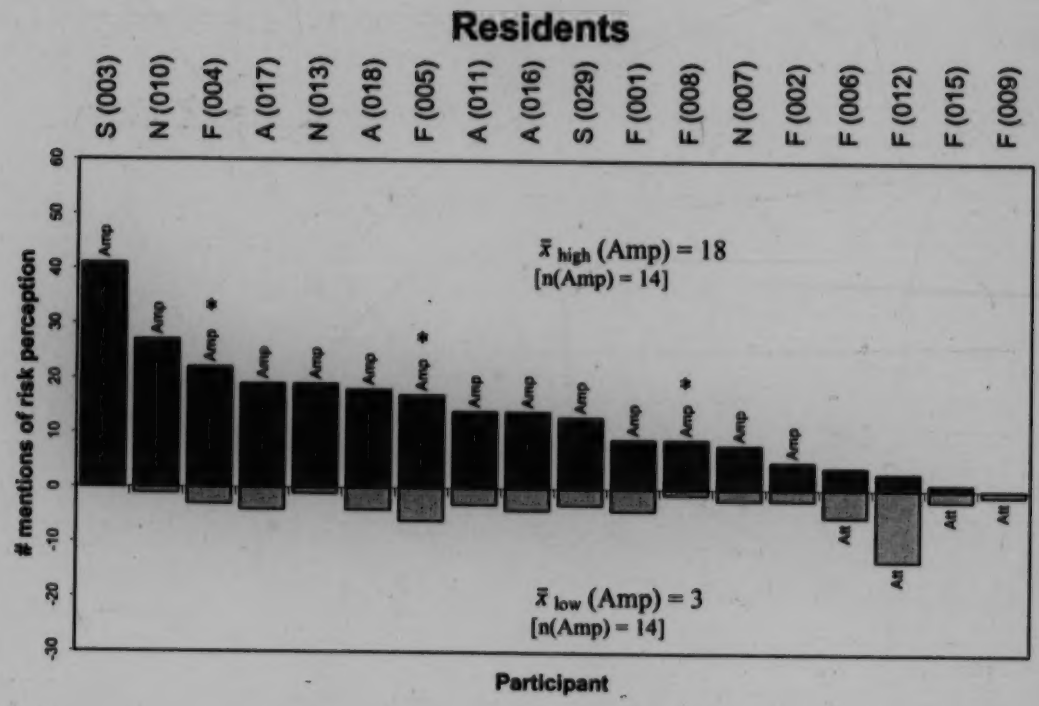


**Fig. 3.1. Risk perceptions of resident interviews (n=18).** High risk perception themes (dark grey) versus low risk perception themes (light grey). Sample means are reported for respondents listed as risk amplifiers (amp; n=14). F=Farmer; A=Acreage owner; S=Rural subdivision; N=Non-resident landowner. *These interviews contain themes from both husband and wife respondents.

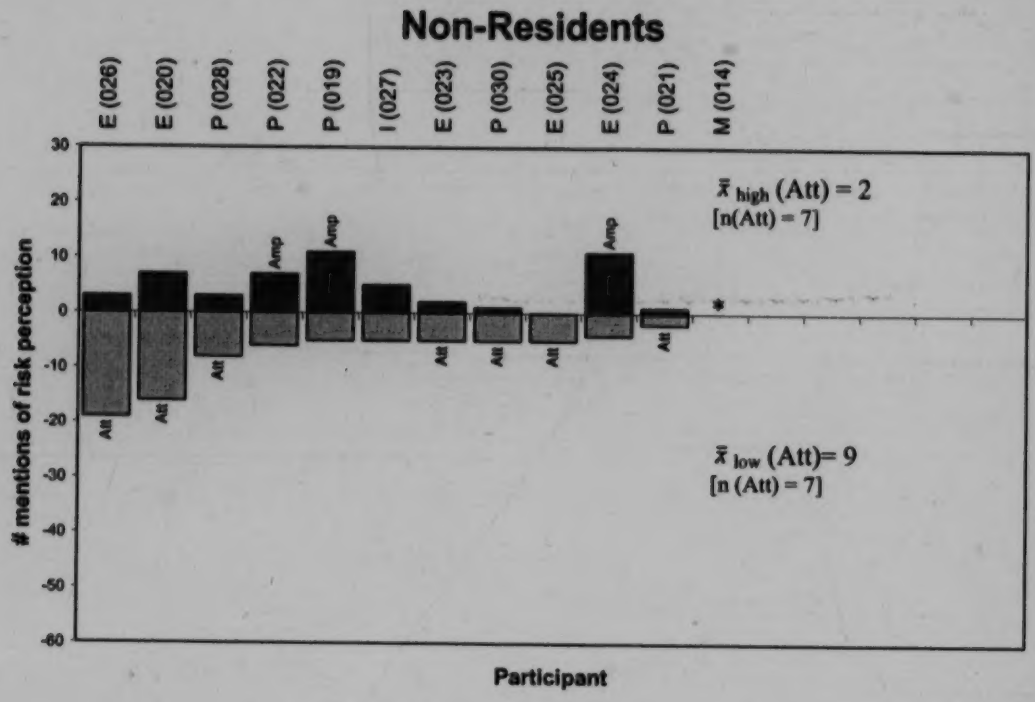


**Fig. 3.2. Risk perceptions of non-resident interviews (n=12).** Low risk perception themes (light grey) versus high risk perception themes (dark grey). Sample means are reported for respondents listed as risk attenuators (att; n=7). E=Elected official; P=Public servant; I=Industry; M=Media. *Note that respondent #014 did not have any risk themes coded in the transcript.

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# Chapter 4.

## 'PLACE UP FOR GRABS': THE CULTURAL SETTING OF ECONOMIC RESTRUCTURING AT THE RURAL-URBAN INTERFACE[15]

### 4.1 Introduction

This chapter investigates the social and cultural dimensions of contemporary global economic restructuring at a rural-urban interface (hereinafter referred to as the 'interface'). A qualitative inductive analysis of a mixed agricultural, industrial, and residential community set out to determine the 'situatedness' of economic restructuring in the lifeworlds of community members. As the economic growth machine of the city advances outward (Pfeffer and Lapping, 1994), communities at the interface are forced to negotiate the implications for the environment, and their health, wellbeing, and quality of life. A diverse corpus of research has sought to understand the impacts of economic restructuring at the interface, ranging across social capital (Sharp and Smith, 2002), environmental perceptions (Sullivan, 1994; Kaplan and Austin, 2004), and class ideology (Winson, 1997). These research areas have contributed to understanding the local social, economic, and political dimensions of economic restructuring and have helped to make sense of contemporary conflict and spatial patterns of land use and policy at the interface (Bengston, Fletcher, and Nelson, 2004). However, among research to-date, few studies give voice to the day-to-day realities of social and cultural struggle among people living within conditions of change (Nelson, 2001). Our understanding of the interface and global restructuring can be further improved through insight into the local social and cultural implications of economic change as experienced by people living within the interface.

This chapter advances this understanding by focusing on linkages between long-term economic restructuring and cultural change from the perspective of a community facing an inter-municipal industrial development initiative. The research is based on a case study located at an agricultural/residential/industrial interface near the city of Edmonton in the Province of Alberta, Canada. The study community has experienced a series of economic transformations from agricultural modernization, rural non-farming country residential development, and growth in the industrial sector over the past 50 years. The research set out to understand reasons for conflict around a most recent iteration of economic restructuring and local cultural changes. Empirical results provide insight into the social and cultural dimensions of these transformations through the lived experiences of local community members. The study reveals that contemporary land use struggles can only be fully understood by realizing past struggles that have led individuals and communities to decisions and conflicts they face today.

[15] This article will be submitted to the journal *The Canadian Geographer* for review.

## 4.2 Locating the interface

Traditional conceptions of the interface have viewed it as a physical location somewhere in-between the city and the country – a transition zone occupied by an evolving state of productive operations in such sectors as agriculture and forestry, and urban consumptive patterns such as ex-urban residential and industrial development. This view of the interface has been advantageous in identifying and analyzing the process of land use change, as well as challenges faced in land use planning and policy. However, conceptualizing the interface as a material space, or object to be studied, provides only one dimension of the multi-faceted processes that occurs along its social and cultural dimensions. Recent critical conceptualizations of place (Massey, 1997; Cresswell, 2004) offer alternative ways to understand the network of relations that constitute the interface not just as a site, but as a process involved in the continuous struggle over place. A critical approach helps to elucidate the interface as the process of contested 'place-making'.

*The interface as process*

The interface is a place that has increasingly become the site of contemporary economic conditions linking urban expansion, rural sustainability, and global integration (Bryant, 1995; Mitchell, 2004). However, the interface is also a 'lived-in' space (Soja, 1996, Nelson, 2001) where people enact their lives, seeking a sense of place in their homes, workplaces, communities, and natural and built landscapes. The interface is not merely a location, a bounded space in the countryside that happens to be 'close' to the city. Current approaches see the interface as a socially constructed place exposed to the influence of both urban and rural pressures, constraints, and opportunities (Halseth, 1993; Henderson, 2003). Following Doreen Massey (1997), the interface can be conceived of as a place created out of social, cultural, and economic processes and flows – a particular constellation in time and space of a network of relations that bring together economic development, ecology, geography, and cultural change. The interface is thus a place that is continuously in flux – the site of profound transformation of rural space into something 'other' (Harper, 1987). Neither fully urban nor rural, the 'other' may be created from 'desirables' of the countryside – cheap land, natural resources, aesthetic attributes, access to parkland, and forests. It may also be the site of 'undesirables' from the city – waste disposal, polluting industry, and big box stores. To further complicate things, what is considered 'desirable' depends on who is doing the 'viewing' (Cresswell, 1996).

*The interface as community*

From a process-oriented perspective, the interface both perpetuates the rural and becomes the site of urban consumption. In-between the influences of city and country, the interface is also the site of a culturally transforming community. The interface does not 'become' from previously unoccupied space, but is the outcome of spatial transformation of existing human activities or habitation ranging across resource

extraction, forestry, agriculture, parkland, and rural living. Only after exposure to urban pressures do these places become 'interfaced'. For example, real estate developers may create residential communities to exploit nostalgic representations of rural as 'nature'. The appeal of a country lifestyle in proximity to urban amenities compels exurbanite families and retirees to colonize rural subdivisions located in formerly agricultural or forested lands (Halseth, 1993; Sharp and Smith, 2002). In contrast, the interface can also become a place to do business. As cities grow outward, the interface becomes the site of new economic activities that balance affordable land with proximity to urban client bases (Gorton, White, and Chaston, 1998; Mitchell, 1998). Community transformations within the interface therefore emerge out of a series of pressures, constraints, and trade-offs around lifestyle, economic development, and ecological sustainability. What constitutes 'community' again depends on who is involved in, and kept out of, development decisions.

*The interface as contested 'place-making'*

Transformations that take place at the interface are almost invariably negotiated out of conflicting ideas between competing interests, including those of local governments, businesses, rural residents, environmentalists, farmers, and real estate developers. Each group has different ideas around appropriate directions for development. This sets the stage for a cultural conflict among competing interest groups who struggle to have the interface 'become' what each desires. Conflicts around different forms of economic development, coupled with lifestyle or environmental concerns, come face-to-face at the interface, creating conditions for competing landscape visions (Halseth, 1993; Roberts, 1995). In other words, the interface is a place that is 'up for grabs' between opposing political, economic, and cultural forces linking city and country, and increasingly, local and global. Returning to Massey (1997, 2004), these forces create a place nested within a network of vertical and horizontal social relations (Figure 4.1). Vertical linkages with economic and political processes contribute to local conditions subject to the control of regional, national, and global actors – the local is increasingly 'plugged-in' to contemporary globalization (Cooke, 1989; Massey, 1997). At the interface, these linkages are situated in-between pressures between urban 'city life' and rural 'country life' that inevitably create conflict as the future of the interface is negotiated.

Taken together, the above concepts provide a perspective that views the interface as a constellation of cultural, economic, and political interests and struggles. These struggles play out at the local level to influence people's everyday lifeworlds as part of a locally contested definition of the interface. That definition is always contested along social and cultural disjunctures that see the interface as something in-between 'nature', 'home', and 'progress'. It is therefore crucial to disentangle the cultural processes surrounding development at the interface in order to uncover how global economic restructuring can both shape, and be shaped by, local communities. To understand the interface from a local perspective requires a qualitative approach to discover how restructuring occurs 'on the ground' (Baxter and Eyles, 1999). The voice of restructuring is often not heard in theoretical and structural discourses of the interface (Nelson, 2001).

Qualitative case studies allow us to listen to the words of the people immersed in the political, economic, and cultural struggles of economic restructuring. Furthermore, this approach requires a historical and spatial sensitivity that is attuned to how the interface came to be as it is today. The problems of today are the product of past events as the interface has unfolded over time.

## 4.3 Background

*Alberta's Industrial Heartland*

The case study is a two-year (2002 – 2003) investigation of a community undergoing land use shifts between agriculture, residential, and petrochemical industry. The community is situated at the interface between a rural agricultural region and a major urban centre in central Alberta, Canada, approximately 35 km northeast of the capital city of Edmonton (Appendix A). The goal of the study was to understand reasons for community conflict around a proposed inter-municipal industrial development plan called the *Alberta's Industrial Heartland* (hereinafter referred to as the 'AIH'[16]).

The AIH was a development plan formally adopted in 2001 after a concerted effort by three rural municipalities (Sturgeon, Strathcona[17], and Lamont Counties) and one small urban centre (City of Fort Saskatchewan, population 13,000) to create a 194 $km^2$ 'eco-industrial park' (AIHA, 2002). The AIH proposal included land use complementary area structure plans (ASPs) that altered zoning distribution, created residential building code restrictions, and implemented eco-industrial planning principles to foster coordinated industrial development (AIHA, 2002). Its purpose was to facilitate the promotion, coordination, and development of a petrochemical centre that would serve the entire northeast portion of North America. The geographic setting of the study area put it an ideal location in the centre of a corridor between rich oil and gas reserves in Alberta in the north and U.S. markets in the south.

Within and around the area designated as the AIH were several hundred farmers and other non-farming residents living in rural subdivisions and on acreages. A public consultation program undertaken between 1999 and 2001 provided a venue [redacted]are information and obtain feedback from the public about the AIH proposal in an effort to win the support of these people. This included a series of open houses, workshops, meetings, and public hearings that brought together local officials, industry representatives, provincial regulators, and members of the public. Overseeing this process, the *Alberta's Industrial Heartland Association* (AIHA, or the 'Association') was mandated to serve the interests of all four municipalities and to present the AIH on a global stage to attract industrial investors (see Chapter 2).

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[16] The authors realize the place-naming hegemony associated with the term 'AIH'. Residents who live within the AIH boundaries do not identify themselves as being 'in' the AIH, but opposed to it.

[17] Although Strathcona County is geographically rural, its political centre lies in an urban centre whose population exceeds 40,000.

As word spread through the community about the AIH proposal, more and more residents became increasingly concerned about its potential implications. Over time, some members of the community coalesced into the *Heartland Citizen's Coalition* (HCC). The goal of the HCC was to ensure that the collective voice of residents affected by the AIH proposal was not ignored by decision-makers. At the root of the conflict were incompatible views on appropriate development – agriculture, residential living, and industrial expansion could not occur in the same place. What ensued was a cultural and political struggle that pitted pro- and anti-development groups against each other in a vocal, public debate that still persists three years after the AIH proposal was approved.

To understand the basis for contemporary conflicts occurring in the study area, it is important to review the historical circumstances that have led to its current status as an agricultural interface in the context of the 'Alberta Advantage'[18] (Chastko, 2004). Current land uses in the study area include a messy assortment of hobby farms, large scale agricultural operations, and non-farming rural residential neighbourhoods and acreages, all spread within and around an increasing number of medium to heavy petrochemical and other industrial operations. The following review of this spatially contingent history includes a series of globalizing forces that have acted on the study area that have given rise to this heterogeneity of land use over the past 130 years. Figure 4.2 provides a conceptual framework that situates the case study within the context of global economic restructuring upon which the AIH is situated.

### 4.3.1 Agricultural restructuring

*Western settlement*

Beginning in 1867, the prairie west became subject to centralized governance of the newly confederated Dominion of Canada. As part of an ambitious nation-building strategy, Canada's fledgling government instituted a National Policy that would establish a western 'investment frontier' to support economic development in central Canada (Friesen, 1987; Hay, 1992). Opening up the west to agricultural settlement created linkages between western agricultural products and eastern manufacturing. These west-east linkages promoted a robust national economy and help to establish Canadian sovereignty over American influences to the south. First, the Dominion Lands Act of 1872 encouraged immigrants coming to Canada to settle in the west. The Act provided 80 to 160-acre land grants that required settlers to establish small agricultural homesteads (Hay, 1992). Second, the Canadian Pacific Railway (CPR) provided the structural plank that would bridge the east with the west. Starting in 1881 and completed in 1885, the railway provided the means to ship agricultural products east, further encouraging western migration and rural development (Anderson, 1992).

Over the next four decades, over one million people settled the west, comprising nearly a quarter of Canada's population. The arrival of tens of thousands of settlers

[18] The 'Alberta Advantage' is a widely used promotional term employed by the provincial government. It emphasizes the business friendly political and economic climate in the province, evidenced by its low taxes, educated workforce, and industry-friendly regulatory environment.

transformed the west from a frontier into a resource hinterland for the manufacturing centre of Canada. As early as the beginning of the 20th century, globalization was taking shape. A shift in European diet preference for bread coupled with an increasing food deficit in its rapidly industrializing economy made wheat a crucial international commodity. Western North America became the breadbasket of the world's newly established 'First World'. By 1928 Canadian wheat sales constituted nearly half of the world's export market, securing the family farm the "paramount institution" of the west (Friesen, 1987; p. 301).

*The decline of the 'prairie west'*

By the end of the Second World War, Canada's economic climate had dramatically changed. After a decade of drought and economic depression during the 1930s, the golden era of the agricultural west had come to an end. As urbanization began to take hold on national living preferences, the rural west was no longer admired for its pioneering spirit. Instead, it was seen as a backward way of life by an increasing number of 'progressive' urbanites moving to the west (Friesen, 1987). The dust bowl years drove the political hegemony of agriculture (that had operated through a political machine called the United Farmers of Alberta) out of power. In its place, a globalized industrial economy opened up the agricultural west to new technologies as well as unstable markets and international competition (Singelmann, 1996). First, rapid technological innovation that followed the war contributed to the mechanization of farms, meaning that fewer people were required to run traditional family-oriented operations (Millward *et al*, 2003). Second, global market liberalization encouraged transnational competition, resulting in lower prices that required larger scale farming practices to maintain profit margins (Flora *et al*, 1992; Millward *et al*, 2003). Over time, the consolidation of traditional family farms into large scale corporate agricultural operations led to a decline in farming communities all over the prairie west (Stirling, 2001). By 1936, 75 percent of farmers in Alberta relied on wage labour to supplement farm income (McGinnis, 1977). In the wake of globalizing agriculture, there were few winners – between 1940 and 1980, the number of farms in Alberta was cut in half (Hay, 1992). The decline in opportunity resulted in a youth exodus - scarce opportunities forced younger generations to seek opportunities elsewhere. A cultural shift had taken place in the farming way of life:

> The family farm was, by 1980, a business rather than a way of life…Though agriculture remained a defining element of the prairie west in the 1980s as it had been in 1940 and 1900, its relative influence had declined sharply with the drop in farm population, and, even more important, its practitioners – the farm families – had become almost as 'urban' as city-dwellers. (Friesen, 1987; p. 435)

Despite the decline of agriculture, the population of rural Canada did not decrease over the 20th century. Rather, an increasing diversity of non-farming land uses brought a steady influx of new occupants to rural areas; such that by 1956, the non-farming population began to outnumber the farming population in rural Canada (Figure 4.3). As farming youth exited the agricultural way of life, a new form of rural resident emerged to

dramatically transform land use at the interface. Throughout North America, local economic development initiatives responded to the rural migration of urbanites to help bolster community sustainability under the changing circumstances. Furthermore, local governments have been increasingly empowered through a devolution of policy responsibility to make decisions in regard to land use and economic development (Byrant, 1995; Jean, 1997; Kettl, 2000). In many places, efforts have focused on plans and projects designed to widen local tax bases through local infrastructure development projects (Dekel, 1994).

*Local effects*

The Edmonton region was firmly established by the mid-1880s as a core agricultural area due its proximity to the rich fertile soil of the North Saskatchewan River. At the turn of the century, an extension of the CPR from Calgary to Edmonton led to a population increase to over 4000 in the city. For the study area, this meant a new avenue for the transportation of wheat, placing it firmly in the shadow of Edmonton's economic and political influence. This proximity to the urban influence of Edmonton ultimately secured the fate of the region as a rural-urban interface for the next century.

As agriculture declined through the prairie west, farmers in the study area were fortunate beneficiaries of their proximity to Edmonton which provided a means to supplement farm income through local off-farm work, or to get out of the agricultural business altogether by subdividing land for residential use. Where approximately one quarter million people migrated out of the west during the 1930s, the local community in the study area benefited from the availability of off-farm work. However, the buffering effect of local employment opportunities was limited. Today, the effects of agricultural restructuring are apparent from two demographic trends. Figure 4.4 shows the age cohorts from the 1996 Census of both the Canadian population and of rural census enumeration areas that coincide with the AIH boundaries. The trend is clear – a growing population in the 40 to 60 year age range accompanied by a lower youth population between the ages of 20 – 35 years is reveals that the future of the region's farming community is being gradually replaced by non-farming rural exurban families and retirees. Furthermore, the steady loss of agricultural resiliency has opened the study area to non-farming avenues of economic restructuring that have included not only residential land uses, but also increased industrial presence which are together changing the face of the community.

### 4.3.2 Demographic restructuring

*Global migration and counterurbanization*

The globalizing effects of World War II resulted in large-scale demographic shifts that had two main effects on the rural countryside. First, increased global human mobility and changing federal immigration policy encouraged large scale immigration to Canada. Most of these immigrants preferred to establish themselves in urban centres that could offer more employment opportunities. The result was that by the 1990s, urban dwellers

represented over three quarters of the Canadian population (Figure 4.5). This increase in the urban proportion of Canada's population influenced the way the nation was governed. As the urban population exploded, governments at all levels were obligated to pay increasing attention to the needs of Canada's growing cities. Second, in the 50 years since the start of the baby boom of the 1950s, Canadians have made lifestyle choices that have looked increasingly to the rural countryside as a preferred place to live. As the baby boom generation retires and their children establish families of their own, cities are coming under increasing pressure to establish communities to accommodate people moving into suburbs and exurbs (Foot, 1998).

In Alberta, these demographic trends were manifested in policies that have encouraged residential development at Edmonton's rural-urban interface. Between 1950 and 1995, land use in Alberta was overseen by provincial government statute. In particular, the study area fell under the management of the provincially established Edmonton Metropolitan Regional Planning Commission (EMRPC) that ensured that "the continued development of the Region's urban municipalities will benefit from a coordinated planning effort" (Edmonton Metropolitan Regional Plan, 1984; p. 11). Through land use policy, the Commission gave precedence to urban interests through objectives to "maintain the City of Edmonton as the dominant community in the region" and to "provide for the planned expansion of urban land use" (Edmonton Metropolitan Regional Plan, 1984; p. 11). With regard to rural areas, the Commission's objectives were to "guide rural residential land use to locations…which provide a high quality environment for the rural resident" (p. 15). This meant that government interest in the interface rested mainly on establishing country residential opportunities for rural real estate development.

*Local effects*

As a result of regional level urban primacy, through the 1970s to mid-1980s, policy-makers allowed several non-farming neighbourhoods and acreages to develop throughout the study area, concentrated mainly in the scenic natural areas along the North Saskatchewan River valley. Economic affordability and value-oriented rural migration made the area a choice location for the continuing North American counterurbanization movement that resulted in the suburban flight of the 1970s and 1980s. (Mitchell, 2004). By 1984, for example, over 91 percent of country residential dwellings were built after 1970. This constituted approximately 40 percent of all dwellings at Edmonton's rural urban interface (Edmonton Metropolitan Regional Plan, 1984). For the exurban migrants, the region was seen as a rural idyll: an escape from noise, crowds, and crime of city life in favour of a quiet, peaceful rural lifestyle.

By the 1990s, however, the provincial policy environment had changed. A devolution of governance that precipitated from a decade of Western neo-liberalism created a trickle down of responsibility to the local level in regard to environmental regulation and land use planning. Faced with growing resistance from the globalized energy market to centralist land use policies throughout Canada (Everitt and Bessant, 1992), the provincial government removed itself from land use planning, regulation, and

policy-making by dissolving its regional planning commissions. As a result, municipal governments were obligated to make land use decisions in their own interests and became responsible for the coordination of industrial development. Following provincial statute (Government of Alberta, 1994), the four municipalities saw an opportunity to take advantage of the growing opportunities for petrochemical industrial development resulting from the burgeoning oil sands projects in the province (Chastko, 2004). Beginning in 1993, local governments began to establish parameters for the future creation of the AIH. This signified a shift in municipal economic priorities toward the oil and gas sector as a new opportunity for industrial development at the interface.

### 4.3.3 Resource restructuring

*The 'new' west*

After the 1940s, technological advances resulting from the war effort were transformed into the civilian amenity market (Furuseth, 2003). The popularization of the automobile and other domestic conveniences created large demands for energy to feed the modernization of the economy and personal livelihoods. Where population growth in the other prairie provinces remained stagnant over most of the second half of the 20th century, the situation in Alberta was quite different (Hay, 1992). Through political efforts, the provincial government had been able to secure the transfer of natural resources from federal to provincial control in 1930, leading the way into the next era of Alberta's economic growth (Hay, 1992). Large oil and gas reserves under the eastern slopes of the Rocky Mountains provided oil and gas feedstock to fuel the technological revolution taking place throughout North America, thus contributing to profound growth of the provincial economy. The discovery of oil in Leduc (10 km south of Edmonton) in 1947 and Redwater (adjacent to the study area) in 1948 marked the beginning of the oil and gas boom in the province which has continued unabated. In only forty years after 1941, Alberta's population nearly tripled due to increased opportunities in the growing cities of Edmonton and Calgary (Hay, 1992). Within three decades, the oil and gas industry became the economic priority of the province and currently comprises over one third of the provincial economy (Alberta Revenue, 2004).

*Local effects*

The geographic location of the study area provides it with several economic advantages that make it suitable for the development of downstream petrochemical industries. Several biophysical features such as subsurface salt caverns, a steady water supply, and a nearby supply of petrochemical feedstock make it the ideal location for petrochemical manufacturing and storage. The proximity of the area to the City of Edmonton provides access to skilled labour and upward linkages to international markets. Together, these features have led to the development of a growing industrial presence centered in Fort Saskatchewan over the past 50 years. Since that time, the provincial economy has made significant investments in the energy sector that have encouraged proliferation of downstream oil and gas processing and manufacturing. Furthermore, by the 1970s, the provincial government created new economic policies to take advantage of

huge profits resulting from high post OPEC-crisis oil and gas prices (Friesen, 1987). The wealth generated from this global phenomenon compelled the government to further increase its petrochemical industrial capacity. The periphery of Edmonton became a key site for the new emphasis on petrochemical processing with several petrochemical industries having been established in both Strathcona County and the City of Fort Saskatchewan. Existing infrastructure, proximity to resources, and improved transportation of labour and products have made the study area particularly attractive for further industrial investment (AIHA, 2002).

In sum, economic restructuring is not a recent phenomenon, but a long term process at the agricultural interface in the prairie west. Since the beginning of Canadian settlement in the west, the study area has been plugged into a series of economic, political, and cultural transformations that have re-shaped the local community time and time again. In the face of such transformations, the current AIH proposal is but one example of a localized and spatially oriented rural development policy in the wake of longer term economic restructuring (Bryant, 1995; Marsden, 1995, 1998). This historically situated perspective helps us to understand the cultural dimensions of economic restructuring as they play out at the local level.

## 4.4 Methods

A qualitative case study approach provided a mechanism to investigate the AIH as a logical consequence of long term economic restructuring. The research commenced in mid-2002 following the final public hearings that took place to approve the AIH proposal in the four municipalities (see Chapter 2). The first research step sought out key informants in order to obtain perspectives from a diverse array of community members, officials, and representatives from local newspapers. In addition, a review of local newspapers and documents produced by the Association helped to inform the policy context and provided background material on the public debate surrounding the AIH proposal. Once the objectives of the study were in place, the investigators obtained letters of support from stakeholders representing the local community, province, and relevant agricultural and industrial organizations. This ensured that the research outcomes would be locally applicable to these stakeholders.

The data employed in this chapter centred on individual/couple and group face-to-face, semi-structured interviews (Hay, 2000). An interview protocol elicited first-hand accounts of respondents' everyday lives and experiences, including their reactions to the AIH proposal and involvement in the public consultation program. Interviews commenced in May 2003 and continued until January 2004. Respondents were recruited via a combined random/snowball sampling technique to ensure spatial representativeness and to obtain contradictory and silent perspectives (Bryant, 1995). Interviewing continued until no new themes emerged in the analysis, a process known as data saturation (n=30; 33 respondents, including three husband and wife interviews). Following the first round, interviews continued with a cross-representative sub-sample of the original respondents (n=14 interviews). The purpose of the follow-up interviews was to obtain clarification of respondents' views and to further explore emergent themes.

From all of the individual interviews, thematic analysis continued and produced a preliminary summary of findings. This summary was presented at a group interview that included a cross-section of respondents from the original sample (n=7 participants). This group provided a final opportunity to review findings and discuss implications of the project in a group setting.

The investigators used specific measures to enhance rigour and to bracket their own positionality as city-dwelling academic researchers in the research project (Baxter and Eyles, 1997; see also Appendix J for a personal biography). To help ensure that the project remained relevant to the community in the study area, a community advisory committee met regularly throughout the project. The committee was comprised of individuals representing groups who had provided letters of support for the project. Members brought local expertise in agriculture, governance, industry, and community to the table, providing a mixed representation of advocates and opponents of the AIH and an excellent, albeit controversial, sounding board for exchange of ideas. Further strategies for rigour included: (1) pilot testing of interview guides; (2) member checking; (3) one year of field exposure; and (4) presenting data tables containing counts of the numbers of respondents and mentions of each theme (Baxter and Eyles, 1997; see also Chapter 3). This last strategy provides a way to indicate the prominence of certain topics over others. The reporting of frequency counts of qualitative data has been shown to improve the interpretation of the social context of the results, over and above the individual representations of themes solicited from presenting excerpts of data alone (Baxter and Eyles, 1999).

## 4.5 Results

The results are structured around three local dimensions of global economic restructuring taking place in the AIH. These include agricultural restructuring, demographic restructuring, and resource restructuring. In the interviews, respondents reflected on these aspects of restructuring, either as residents living in a community located within the proposed AIH boundaries, or as authorities and businesspeople working in the local policy environment. Several key findings show that the spatial and historical contexts of economic restructuring were employed as strategies to authenticate positions in a politics of place-making within cultural changes at the interface. Furthermore, the results confirm specific ways in which the three aspects of local economic restructuring have impacted residents' lifeworlds, providing insight into the local cultural implications of the AIH.

### 4.5.1 Agricultural restructuring

Economic restructuring was lamented among respondents (mainly farmers) who saw the gradual replacement of agricultural with other land uses as the end of an era. Table 4.1 shows two emergent themes representing respondents' views of, and reactions to, the declining agricultural community in the region. The first theme deals with the impact of population decline for the viability of farming, and the second highlights the political and economic implications of this change.

*Farm depopulation*

Respondents reflected on the effects of farm consolidation on the local farm population (8 respondents; 11 mentions). Reduced opportunities for traditional farming practices meant that many local farmers who could no longer compete with larger operations had left the region. This was evident in the words of Ben, who reminisced about the emptying out of the rural landscape:

> *You see all the little farms when you're out driving around. Must have been a family on just about every quarter or every other quarter, and now you see all these empty farm houses. They're all broken down, but one time, a family lived there. There were lots of families, whereas now, there aren't. You can go for a long distance, and there's not too many people.* (Ben, farmer; 005)

Farm consolidation was also tied tightly to the youth exodus phenomenon. Richard reflected on the disillusionment of rural youth toward the idea of continuing the family tradition:

> *There's a trend that farms are getting bigger and bigger and you just can't make a living on a small farm. It's becoming more and more difficult. It starts with people getting off-farm jobs just so there's money so they can buy groceries. And their children see that there's no future in this, so they say "well we're not even gonna consider farming".* (Richard, farmer; 001)

The perspectives of Ben and Richard reveal that agricultural restructuring had tangible effects on the local farming population. With fewer small scale agricultural operations and the absence of the next generation of farmers, the future of the family farm was put in question.

*Political and economic decline*

Some respondents also emphasized how the population decrease resulted in a decline in the political and economic capacity of farmers to exert influence in local decision-making (7 respondents; 13 mentions). Fewer farms meant there were fewer farmers to have a voice in the local political agenda. For example, Chuck felt that the remaining farmers would not be able to protect their way of life from the imposition of new interests:

> *Our county out here now, it used to be an agriculture county. Well, now, we've got a bit of industry, so now we're getting a lot of rural domestics, acreages, so we're totally getting outnumbered.* (Chuck, farmer; 012)

In contrast to the perspectives of farmers, some local authorities provided a competing

perspective on the population decrease by approaching the change as an economic opportunity. For example, Brenda saw the impact of agricultural restructuring solely in monetary terms and the potential gains that farmers could achieve through the local real estate market. In doing so, she discounted the 'way of life' argument, believing urban expansion to be an opportunity for farmers to make a profit:

> *Most of the farmers, when I heard their views of being upset when the land zoning municipal development plans had changed, and all of a sudden they were farming, had farmed for generations: "You mean I can't sell this for a subdivision now?" Well, that's not farming any more; you want to become urban, you want to make profit. So that was a monetary effect on them, it wasn't a lifestyle.* (Brenda, former elected official; 022)

Together, Chuck and Brenda's contrasting perspectives show how agricultural decline was not only an issue of population change, but had important implications for the local political and economic context. While one view saw change as a lost way of life, another saw the AIH as an opportunity for farmers to get out of a 'lost cause'.

### 4.5.2 Demographic restructuring

Table 4.2 shows two themes that summarize respondents' perspectives in regard to the arrival of exurbanite communities and their impact on the local community. The arrival of rural subdivisions and acreages signified a shift both in people's relationships with the physical landscape and in social relationships among neighbours.

*Counterurbanization*

Respondents reflected on the rationale underlying exurban in-migration (22 respondents, 66 mentions). With a sparse population and abundance of tree-covered land, respondents emphasized how the North Saskatchewan and Sturgeon river valleys offered a quiet, pollution-free environment for the urban refugee. It was these aesthetic attributes that led to a substantial influx of non-farming residents beginning in the 1970s. Over the next three decades, rural subdivisions with attractive names such as Hu Haven and Fort Augustus developed in the region, notably only a few kilometers away from large industrial centres. Retirees and middle-class families bought into the idea of a lifestyle that allowed them to enjoy nature. For Rachel and her family, the river valley offered the ideal location to establish roots:

> *We spent a long time choosing this particular spot. It's a beautiful spot. We back onto the Sturgeon River so that's all parkland in there. So our kids are able to enjoy the river. Go down and play with the frogs and what other little creatures they want to play with. It's very nice out there. We really enjoy it.* (Rachel, subdivision resident; 029)

Furthermore, proximity to the major urban centre of Edmonton was particularly appealing. The ability to enjoy a rural quality of life while having access to retail and

cultural amenities made the region an ideal place to establish a home outside of, but still connected to, the city. Despite having lived for over 30 years in the region, Beth remained attached to her roots in the city:

> *I grew up in Edmonton, so really, I'm a city girl...but I like the services and I like the availability of Edmonton.* (Beth, farmer; 005b)

*Farmer – non-farmer interactions*

Counterurbanization also had impacts on the social relationships between farmers and non-farmers (24 respondents; 70 mentions). The influx of exurban residents redefined the way respondents viewed the cohesiveness of the community. As the farming population was gradually replaced, farmers who remained noticed a palpable difference in the sense of neighbourliness in the community. Greg, a lifelong farmer in the region, reflected on the loss of close neighbours over the years:

> *The community we live in [has changed]. Having grown up here myself, I used to know all the neighbours. Now the neighbourhood is definitely changing. It's becoming a rather transient neighbourhood these days. But the neighbourhood goes back many many years. Whereas now I think there's maybe one or two of the old neighbours in the area that we still know quite well, and the rest are all fairly new people.* (Greg, farmer; 004)

The result was a loss in resilience of the community based on traditional agricultural ties – newer residents did not share sentiments associated with having roots in the region's agricultural history. According to a local businessperson, Michael, the new residents did not contribute to the wellbeing of the local community:

> *They're not contributing to the community at all. That's the trouble. They don't participate in a lot of organizations.* (Michael, business owner; 018)

Ultimately, the demographic shift has led to a disjuncture in the place-based interests of farmers and non-farmers. While farmers remained attached to the traditional agricultural way of life, non-farming residents wanted to preserve a sense of place that was based on nature, quiet, and purity. Elmer noted that in many ways, these two ideals, agriculture and nature, were seen as incompatible:

> *Country residential development is not welcome in certain areas, and in fact the majority of the people involved in the agricultural community do not want the imposition of an urban kind of development in the county. They look at it as an infringement on their quality of life. Because the urban person doesn't understand agricultural activities, they don't understand that you're spreading manure, they don't understand that you harvest, that you have chaff lying around, they don't understand that you can't let your dog run around out there as they'll possibly injure the*

*cattle. There's certain restrictions on the urban philosophy in the country.* (Elmer, elected official; 024)[19]

The diverse perspectives between farmers and non-farmers show how demographic restructuring has re-shaped the cultural basis of the local community. Each group had different experiences that contributed to their attachments to the local landscape, which would become an important component of their thoughts about industrial development and the AIH.

### 4.5.3 Resource restructuring

Table 4.3 reports two themes representing positive and negative dimensions of the region's industrial presence. Prior to the changes to the provincial policy context, residential development had been encouraged by the Edmonton Metropolitan Regional Planning Commission. However, the new authority invested in municipal governments in the 1990s made it clear that industry would be the lynchpin for the region's future economic development. Supporters of the AIH proposal emphasized the substantial opportunities that industry would bring to the local economy. However, the potential for industry to improve local economic conditions was limited by the risks that some respondents believed might accompany 'too much' industry.

*Off-farm work*

To many respondents, industry 'made sense' from an economic standpoint for the local community (20 respondents; 55 mentions). Respondents were well aware of the long ties that industry had with the community, including farmers who have enjoyed the employment opportunities from local operations. Following World War II, industry became an economic buffer against agricultural decline, providing off-farm jobs to support local farmers. Chuck recalled how the first major company to locate in the region during the 1950s helped him get his start in farming:

> *When I decided to strike out on my own, I needed a job, I went to industry. During the winter months, I was in the fertilizer unloading department. There was, I would say, 100 farmers would come there, throw bags. When I left Sherritt-Gordon, I was milking 10 cows, a couple hundred hogs in the barn.* (Chuck, farmer; 012)

Given this relationship, the rationale of the AIH was that further industrial development would provide yet more employment opportunities for local residents. Industry was sold as a significant contributor to the overall community fabric of the region. Gus was certain that industry and community wellbeing were so closely woven that the very existence of the community depended on its relationship with industry:

> *People have good quality work. That our communities are alive and vibrant, there's children, young children, going to school and things can*

[19] See also Figure 1.3

*all go forward. Whereas without the industry and the growth and the work, our communities would slowly die.* (Gus, elected official; 023)

*Coping with risks*

Despite the economic benefits of the AIH, there were also many negative aspects reported in regard to industrial development and environmental risks (26 respondents; 145 mentions) (see Chapter 3). Richard noted that residents no longer had financial dependence on industry as in the past and were increasingly concerned about environmental risks posed by further development:

*I think when the first plants came in people were really excited because there were jobs for the young people, and they could stay in the community, but I think that as more and more plants have come in, and I think as we become more and more environmentally aware, I think there's mixed feelings about when is enough enough.* (Richard, farmer; 001)

The proposed intensification of industrial operations accompanying the AIH proposal would impose yet more risks on local residents. Concerns about health and safety for local residents became a strong element of their objection to the AIH proposal. Leah was worried about the combined impacts of intensified industry near her acreage:

*To live by one factory, not so bad. But you start livin' by 20 factories, all of a sudden your air isn't as good. Each one's dumpin' their own crap in the water, the noise level's up.* (Leah, acreage owner; 011)

The encroachment of industry near homes was already a fact of life for Janet who was faced with a situation where her acreage was blocked in by rail and pipelines:

*You always think of an emergency. There's nine pipelines go right across our road. If anything happened with the pipelines, we have no exit.* (Janet, acreage owner; 017)

To cope with the uncertainty and fear of industrial accidents, many respondents have taken it upon themselves to ensure that surveillance of noise and pollution is carried out appropriately. Respondents like Sam did not trust local officials or industry to be accountable for ensuring safe levels of such risks from airborne pollutants:

Sam (farmer; 010): *They have one air monitoring station on the east side of Range Road 220. Now the only time it can ever pick anything up is if there's a west wind. But every time there's a west wind, she's all shut down, gates are locked to the place.*

Interviewer: *So why do you think that happens?*

Sam: *Because they don't want to know what's in the air.*

### 4.5.4 Cultural impacts of economic restructuring

The local dimensions of economic restructuring described above had direct ramifications for the lives and wellbeing of respondents who lived in the study area. Table 4.4 reports three themes that show how the everyday lives of residents were affected by the AIH, industry, and the prospect of living with risk.

*Displacement*

The ultimate aim of the AIH proposal was to gradually replace residential and agricultural land uses with industry. Restrictions were placed on residents' abilities to renovate or build on their properties. Buffer zones created around the perimeter of the AIH ensured that adjacent areas were not affected by the industrial park. In essence, in the mind of many residents, the region was put up 'for sale' on the global petrochemical manufacturing market. Together, these changes resulted in a feeling of displacement among respondents who had built their lives in the region (19 respondents, 81 mentions). Erik reminisced about the years he had spent with his children growing up on their acreage, and how his history would be lost:

> *As the years go by, as the months go by, the weeks, the days, more and more we think about how we can extricate ourselves from this place. I hate to think about it because I hate nothing more than the day I know is coming when we have to move away from here. When you live in a place where your kids have grown up and you know the trees they climbed up when they were little. And sometimes I try to imagine how I'll feel when I drive out of here for the last time. I don't look forward to it.* (Erik, acreage owner; 016)

*Fatigue*

A second impact of the AIH proposal pertained to the public consultation program built into municipal policies and regulations (see Chapter 2). Public engagement was felt to be a heavy burden on many respondents (11 respondents, 40 mentions). The AIH proposal was seen as not only a threat to health, safety, and property values, but it also disrupted people's home life. The time it took to attend meetings, prepare presentations, and sit on committees took its toll on people's personal wellbeing. Jackie was fed up with all of the work she and her husband had done in trying to have their concerns addressed:

> *We're all tired of fighting. I've got better things to do in my life than stick here and fight for the land that I really believe we want to stay on, the house that we've built, it's just not worth it to me. Life is too short. Because there has been quite a fight put up, at some point and you realize in the end, guess what? Nothing really changes. As so I think you just kind of feel that if you've hit a dead-end road why keep fighting?* (Jackie, farmer; 004b)

*Power politics*

Finally, the competing interests that different groups had in relation to the AIH proposal had a negative effect on interpersonal relations. 'Power talk' was implicit in almost all respondents' attitudes and experiences related to the public consultation program and the AIH in general (27 respondents; 274 mentions). Fred viewed the entire process to be tainted by officials who he thought were making up the rules as they went along:

> *We know that the commissioner took [a resident] to one side, into the kitchen, and told her that she wasn't going to be able to go to council meeting because what she was presenting was something she had presented before. He made that up on his own. How much of that goes on?* (Fred, subdivision resident; 003)

Selfishness was a common accusation made by both AIH supporters and opponents. On one side, Ben blamed local authorities for using the AIH proposal to further their political interests rather than serving the community:

> *I have a little mistrust for [authorities], because they do everything for the mighty buck, there's no doubt about it. Like, I don't think they concern themselves with doing things for the benefit of the whole community.* (Ben, farmer; 005)

On the other side, some local authorities believed residents objected to the AIH proposal out of greed. Cory dismissed residents who complained about the AIH proposal as being only concerned with improving their own financial position:

> *Well, you know there's politics and there's truthful. Everybody's self-interest is always at the top of everybody's game and that's what this was.* (Cory, elected official; 020)

Ultimately, the public consultations became so politicized that decision-making could not be undertaken in an objective, rational environment. Emotion, hostility, and resentment formed the basis of most interactions between authorities and residents. Wilma witnessed how the tension had become so intense that that it even became the focus of media scrutiny from the Canadian Broadcasting Corporation:

> *By the time the four municipalities was getting to where they were passing their by-laws, momentum had really picked up, and the [Canadian Broadcasting Corporation] and everyone there, and everyone wants to put their 5 cents worth in, and you have people crying. Then council politicians get very leery: "Should we pass this, should we wait, should we get more information"? Makes it very difficult to make a decision when you've got cameras focused on you and you've got all these people with all these emotions.* (Wilma, civil servant; 030)

On a positive note, shared concerns about the AIH proposal also unified the community. Public engagement became the 'glue' that brought people together. Rachel was convinced that the efforts she had made to voice the concerns of residents had a positive effect on her neighbourhood:

> *There's definitely a sense of community where we live. I mean, I've worked closely, especially since the Heartland issues have come up, I've really got to know a lot of the neighbours. We have a lot in common. We have the same values. We care about our children, we care about the lifestyle that we have, and we want to protect our neighbourhood. I don't look at just that little area as my community. I think especially we're kind of unique.* (Rachel, subdivision resident; 029)

### 4.5.5 Summary

As the results above show, the AIH proposal would have a profound effect not only on the local economic context of the study area, but also on the viability of the region as a place to live. The emergence of petrochemicals as an economic priority for local governments has made it increasingly difficult to balance other land uses. While the economic benefits of industry have been evident from high quality of life, low taxes, and excellent services for farmers over the years, they have gradually become incompatible with the aesthetic attributes that have made this region an attractive place to live by the increasing numbers of exurbanites. Rather than find a way to manage this complexity, local governments chose to adopt a pro-industry perspective from the outset. The overarching purpose of the AIH proposal was to pave the way for further industrial intensification. While industry was chosen as the best way to achieve long term economic sustainability for the region, industrial externalities – including perceived risks from pollution, industrial accidents, traffic, and noise – are the price tag residents think they will pay. These apparent risks meant that industry was perceived to be incompatible with both farming operations and residential living. The interface represented by the study area was characterized by incompatibility among place-making interests based on farming, country living, and industry.

## 4.6 Discussion

The interface is not a just a physical location in-between the city and country. Rather, it encompasses a myriad of social, cultural, economic, and political processes involved in the transformation of the rural into something 'other'. The results from this study paint a picture that reflects the complex and dynamic in nature of communities at the interface. These communities are under continuous evolution in the wake of spatially situated historical and contemporary economic transformations. In other words, these communities are on the 'sharp edge' of urban development and rural sustainability (Furuseth, 2003). Over the course of the past century of economic restructuring in Alberta, rural communities have faced the effects of significant social and economic transformations.

Figure 4.2 summarizes the global-regional-local dimensions that have linked the study area to the larger process of global economic restructuring. The Figure shows three forms of economic restructuring – agricultural, demographic, and resource – that together trace how globalization has materialized as regional forces vying for control over the development of the interface, resulting in local conflict and contested place-making. In the first row (white), agricultural restructuring that resulted from mechanized agriculture and market integration led to the consolidation of farms throughout the prairie west. At the local level, this resulted in a long pattern of gradual community decline in the face of lost employment opportunities in agriculture and youth out-migration.

In the second row (light grey), demographic restructuring that resulted from an increased mobility of the world's population led to a steady flow of immigration to Canada's cities. Rapid urbanization over the second half of the 20th century led to the creation of policies that prioritized urban interests over those of the countryside. At the regional level, this has influenced a counterurbanization movement that has seen an influx of retirees and families into the countryside in search of an amenity rich lifestyle. Locally, residential in-migration into the study area took place with the establishment of rural subdivisions and acreages throughout the local landscape.

Lastly, the third row (dark grey) depicts how resource restructuring following World War II coincided with a technological modernization that created a society dependent on energy intensive products such as the automobile. At the regional level, Alberta's rich endowment of oil and gas development led to a rapid shift in the province's economy from agriculture to oil and gas. Within the study area, Alberta's Industrial Heartland was the logical local consequence of the global demand for energy and petrochemical products.

Within the context of global-regional-local economic restructuring was a locally enacted controversy over community sustainability and economic development. The search for new economic capital in the form of petrochemical industry was positioned outside of the populated areas (but not completely); the preference for industrial development at the interface introduced new pressures and constraints to the community that eventually led to a local struggle to re-define place. Competing interests among proponents of rural preservation, exurban colonization, and petrochemical industrial development came into conflict during the public consultation program of the AIH proposal. Tensions between city and country, as well as local and global, manifested in respondents' accounts of the social and cultural dimensions of 'life at the interface'. Furthermore, the actions of individuals and groups in local cultural and political struggles showed that the economic restructuring not only shapes, but is also shaped by, the local context (Cooke, 1989; Massey, 2004). Economic restructuring has arrived at the interface as a 'tidal wave' of global influence into the countryside. But in the words of Gerald Walker (1995), "people and their settlements are not inert sediments deposited in a landscape. They are active and intentional beings in a humanly created environment" (p.1).

The role of local actors in the struggle to 'make place' in the study area was clear in three ways. First, farmers felt threatened by the encroachment of urban interests into their community. Having survived decades of economic turbulence in the agricultural sector, these people would not easily give up their claims to agricultural primacy in the region. However, the youth exodus and aging demographic of remaining farmers has meant that agricultural interests were represented only by a small group. To those who remained, the influx of exurbanites represented a commodification of the countryside (Mitchell, 1998). The search for the rural idyll transformed the region from a landscape of agricultural production to one of aesthetic consumption. Rural subdivisions and acreages created new forms of community that were no longer based on the attachment to traditional family farming so cherished by the former community. Rather, the new occupants fetishized the landscape through nostalgic mythmaking (Park and Coppack, 1994). No longer were people 'working the land' but instead were 'gazing upon it' (Roberts, 1995).

Second, ex-urbanites worried about land uses that would disturb the natural serenity of the rural refuges they had created for themselves in the countryside. These residents had invested in a place that was free from noise, traffic, and pollution. In this sense, both farming and industrial externalities were implicated as potential threats to the country lifestyle (Henderson, 2003). However, the emergence of the AIH proposal subdued underlying tensions between exurbanites and farmers. The prospect of an industrial hegemony in the AIH compelled both groups to form tentative alliances in the form of the *Heartland Citizens' Coalition*. By merging along lines of common concern, farmers and exurbanites built social capital to oppose the powerful interests of local governments and industry (Sharp and Smith, 2002). Although residents were convinced of the benefits of industry to the economy, they also believed the AIH proposal to be a direct threat to their way of life. The prospect of further industrial development was accepted only if it did not impinge on the economic viability of farming (e.g. pollution free, preservation of good land), the natural features of the river valley, or the health and safety of people and their families.

Third, support for industry stemmed mainly from authorities who foresaw the substantial economic growth opportunity from downstream petrochemical manufacturing. Industrial advocates were driven by a provincial and regional agenda for economic diversification – to continue the push for downstream petrochemical manufacturing as part of the 'Alberta Advantage'. The precedence given to industry turned agricultural and residential interests in the landscape into a constraint for development. The creation of the AIH would eventually put an end to residential occupation of the region, thereby ending ways of life in which people had invested so heavily.

In the end, the local effects of economic restructuring have left a imprint on the social and cultural character of the community situated within the study area. First, the land use changes, industrial intensification, and associated risks that would accompany the AIH caused residents to feel a sense of displacement and uncertainty about the future in the area. Second, the culture of living with industry has led to a fatigue among residents who were increasingly called upon to participate in the regulatory management

and policy decision-making related to industrial development in the area. Third, power came into the picture as the AIH proposal was an effort by local governments to impose one particular perspective on the region's future development. Local governments saw the AIH as an opportunity to exert political control over the landscape in order to attract economic benefits of industrial development. However, it became clear that this view was incompatible with the lived experiences of farmers and exurbanites who viewed the region as home. In the process of sorting out competing interests, the AIH became a focal point for struggles over who belongs and does not belong in the countryside and who gets to define the future for the interface.

## 4.7 Conclusion

The results of this study show that global economic restructuring is best understood as inextricably linked to the local through a historical and spatial sensitivity to the lived experiences of communities facing continuous change. The AIH represents one form of global economic restructuring that has resulted in a disruption and re-negotiation of the lifeworlds of people situated in one such community. Through its effort to impose a new direction for the region, the AIH proposal created a venue for conflict among farmers, exurbanites, and local governments. What ensued was a cultural and political struggle that pitted neighbour against neighbour and citizen against government as each group struggled for control over the fate of the region. Originally known as the 'agricultural heartland' of North America, the west was built on the labour of generations of farmers whose way of life revolved around farm life, small towns, and community. The AIH proposal usurped the heritage that was associated with this image to create an 'industrial heartland' for oil and gas production. Finally, resistance to the AIH compelled citizens to take back the image of the heartland through the establishment of the *Heartland Citizens' Coalition*. The result is a 'people's heartland' unlike any that has been seen before – a place that is 'up for grabs'.

**Table 4.1. Local dimensions of agricultural restructuring.**

| Theme[a] | # Interviews (n=30)[b] | # Mentions[c] | Example sub-themes (nodes) |
|---|---|---|---|
| Farm depopulation | 8 | 11 | Market integration<br>Mechanization<br>Youth exodus |
| Political/economic decline | 7 | 13 | Political voice<br>Land value |

[a]*Themes from the hierarchical coding tree for interviews, based on inductive analysis techniques.*
[b]*How often the topic was talked about, represented by the number of interviews in which the theme was coded.*
[c]*The prominence of the topic, represented by the total number of mentions of the theme across all interviews. This number will always be equal to or higher than column 2 as respondents may talk about a particular theme multiple times.*

**Table 4.2. Local dimensions of demographic restructuring[a].**

| Theme | # Interviews (n=30) | # Mentions | Example sub-themes (nodes) |
|---|---|---|---|
| Counterurbanization | 22 | 66 | Quality of life<br>Aesthetic features of landscape<br>Proximity to urban amenities |
| Farmer – non-farmer interactions | 24 | 70 | Transience/short term<br>Community participation<br>Community breakdown |

[a]See table 4.5.1 for a description of how to read this table.

**Table 4.3. Local dimensions of resource restructuring[a].**

| Theme | # Interviews (n=30) | # Mentions | Example sub-themes (nodes) |
|---|---|---|---|
| Off-farm work | 20 | 55 | Industry good for economy<br>Off-farm employment<br>Rural business<br>Industry gave me a lifestyle<br>Industry built community |
| Coping with risks | 26 | 145 | Encroachment<br>Health concerns<br>Fear<br>Surveillance |

[a]See table 4.5.1 for a description of how to read this table.

**Table 4.4. Cultural impacts of economic restructuring[a].**

| Theme | # Interviews (n=30) | # Mentions | Example sub-themes (nodes) |
|---|---|---|---|
| Displacement | 19 | 81 | Want to leave<br>Lost desirability<br>Uncertain future |
| Fatigue | 11 | 40 | Discouraging<br>Participation is difficult<br>Not listening |
| Power politics | 27 | 274[b] | No consideration<br>Greed<br>Lip service<br>Already decided |

[a]See table 5.1 for a description of how to read this table.
[b]This theme represents all instances where the data suggested the influence of power (e.g. through political actions, control over public consultation, imposing regulations), hence power politics was an undercurrent almost every aspect of respondents' views of the AIH, the public consultation program, and the citizen-government relationship.

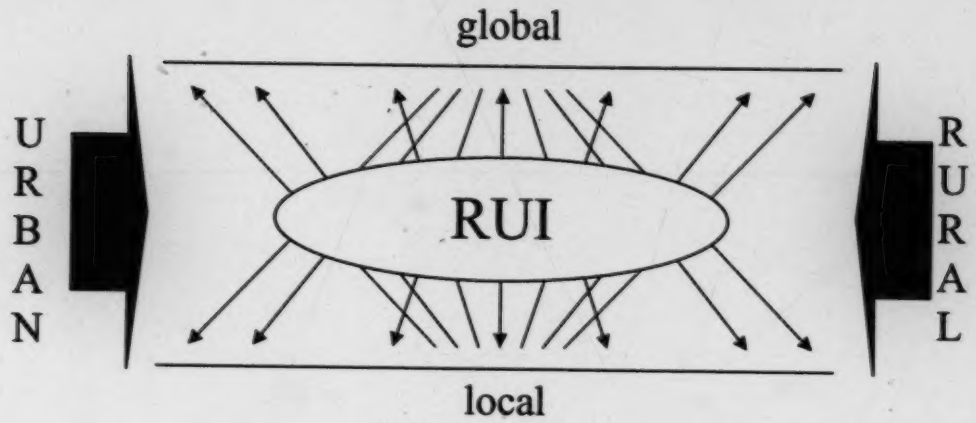


**Fig. 4.1. Conceptualizing the rural-urban interface as a 'nested' place linking local and global and in-between rural and urban.**

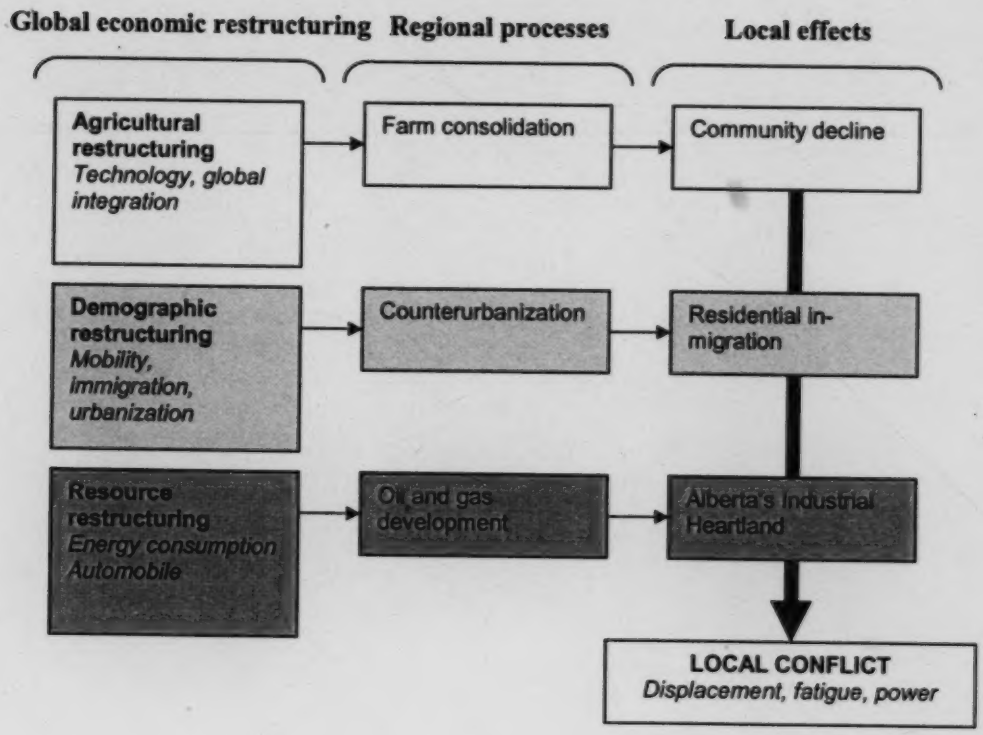


**Fig. 4.2. Social transformation of the rural-urban interface in an agricultural community.**

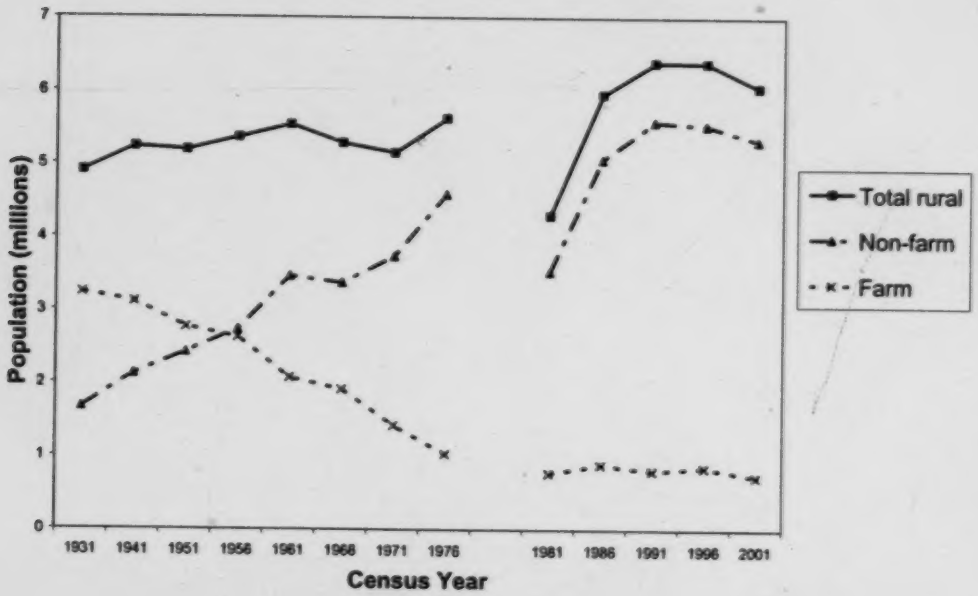


**Fig. 4.3. Change in farming and non-farming population in rural Canada, 1931-1976.** (Source: Statistics Canada).[20]

[20] Statistic Canada definitions for farm and non-farm population changed between 1976 (all persons living in rural areas in dwellings [not] situated on census farms) and 1981 (all persons living in rural areas who are [not] members of the households of farm operators living on their farms for any length of time during the 12-month period prior to the census)

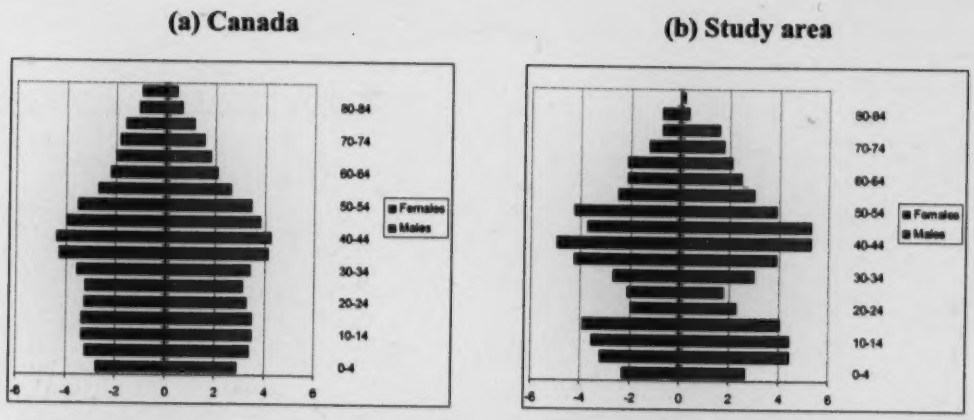


**Fig. 4.4. Age and sex distribution of (a) Canada and (b) the study area census divisions.** Influx of 40 – 49 and higher proportion of 50+ age groups represent exurban flight to the study area. Youth exodus is apparent in the 20 – 29 age groups. Data includes rural census enumeration areas that roughly coincided with the AIH boundaries.

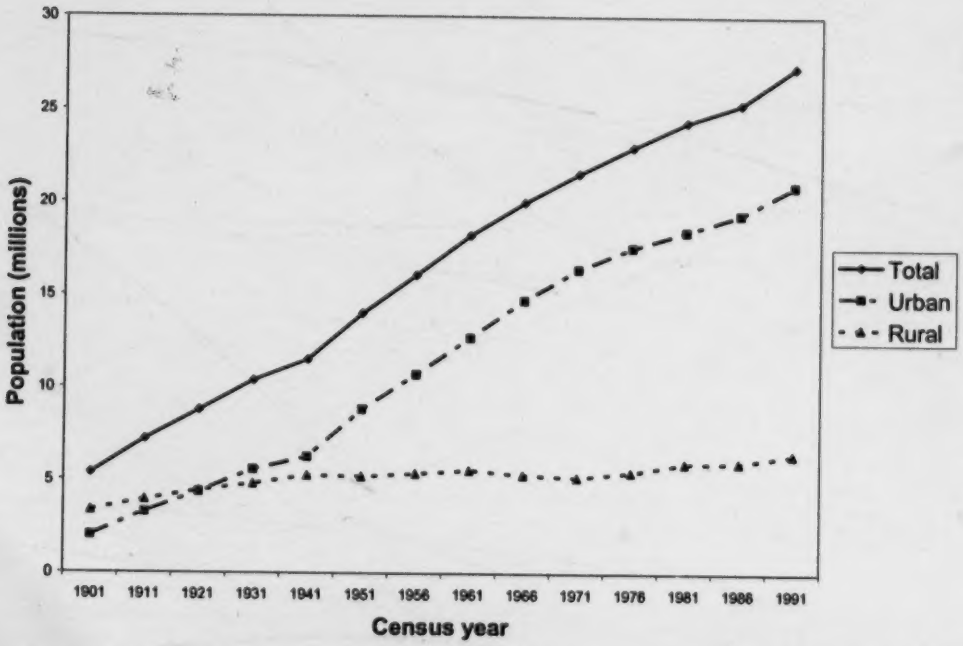


**Fig. 4.5. Population trend: Demographic urban primacy in Canada beginning in 1931.** (Source: Statistics Canada).

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# Chapter 5.

## CONCLUSION

Place is a way of understanding the world (Cresswell, 2004). This thesis examined a locally contested process of place-making by examining its politics – public engagement as the enactment of place-making (Chapter 2); its discourse – risk as the language of place-making (Chapter 3); and its globalizing cultural setting – the local contours of social life that are being re-shaped by global forces acting at the rural-urban interface (Chapter 4). Through the case study presented in the preceding chapters, we can understand place as 'outward looking' rather than parochially introspective. It is outward looking in the sense that place is always *becoming* as it is situated in globalizing social, economic, and political relations that are fluid and dynamic, changing over the course of time. Taken together, these chapters contribute to an understanding of the global sense of place by showing how globalization is enacted at the local level. The research outlined in this thesis prioritized the local as one way to ascertain how a global network of relations is operationalized in the lifeworlds of people as they go about the taken-for-granted practices of everyday life. In this case, everyday life revolved around cultural negotiations relating to agricultural, residential, and industrial land uses.

This thesis has dealt with three substantive areas of place-making in the local context of land use decision-making. The research represents advances in the empirical deployment of place in social theories of public engagement, risk, as well as in rural geography. Across all three chapters, an undercurrent of power illuminates the social relations involved in locally contested place-making. Although each chapter dealt with different dimensions of place-making – its enactment, language, and cultural setting – all cases revealed the mobilization of power in the interest of asserting certain views of the world over others. Within the local struggle to gain dominance over place-making, power is the currency with which to achieve control. While authorities have democratic legitimacy to exercise power, this authority is not absolute. When faced with decision-making that is not in their interest, individuals and communities may find ways to collectively resist the authority granted to governments. This thesis has helped to show when this happens, particularly in the local context of environmental controversies.

Environmental controversies represent a particularly 'grey area' in the realm of representative democracy. It is one where the decision-making process lies in-between the routine, where local governments can act *for* citizens (e.g. municipal services), and the conspicuous, where governments must act *with* its citizens (e.g. annexation, crime prevention). Under certain circumstances, it is uncertain as to the degree to which citizens would be concerned about the results of the decision-making process. Environmental decision-making involving land use and risk is one such circumstance. Figure 5.1 depicts the local decision-making process on a vertical axis between autocracy and direct democracy. The undulating line represents policy decisions normally considered to be routine. For example, regular, daily decisions in local governance are low-level and can

be executed well within the normal parameters of established bureaucratic channels. Occasionally, a policy may be so conspicuous that citizen involvement is obviously necessary (e.g. peak A) and structures for public engagement are put in place to ensure citizen representation. But in instances such as the present case study, it is uncertain whether citizen involvement would be beneficial (e.g. peak B). The land use changes proposed by authorities entered into the grey area, and some provisions for public input were established through the public consultation program. However, pressure from residents pushed the issue into the realm of conspicuous decision-making, and ill-prepared authorities were unable to effectively manage the ensuing controversy.

The position of the undulating line on the vertical axis is also instructive. An autocratic form of governance would be positioned further down the vertical axis, relegating all policy decisions to the 'routine' and ensuring that citizens have no venues for participating in policy decisions. In contrast, direct democracy (i.e. positioned further up the vertical axis) would consider all issues to be conspicuous, leading to participation fatigue. Thus, responsible local governance is a delicate balancing act between routine decision-making that accommodates citizen expectations and over-taxing their busy lives. In the case of the AIH, local authorities believed they were acting in the best interest of the municipalities by asserting local control over future industrial development. However, they failed to recognize how this control conflicted with the unique interests of residents in the region.

## 5.1 Contributions

In terms of advancement of knowledge, this work makes both academic and practical contributions. Academic contributions centred on conceptualizing the role of place and power in localized social processes. Returning to the idea of place as contested multiplicity, each chapter in this thesis reveals one aspect of power in contentious local social relations. Together, they paint a picture of a politicized struggle over place-making situated in a network of power between global forces and local process. The practical contributions stem from the collaborative research approach taken that ensures local uptake of knowledge stemming from interactions between community stakeholders and project researchers.

### 5.1.1 Academic contributions

Chapter 2 found that public engagement represents a venue for power politics in the local enactment of place-making. The research showed that public engagement is a type of formal social interaction controlled by authorities who may or may not bestow citizens with some decision-making power. In the case of the AIH, the degree of decision-making control divested to the public remained at the discretion of authorities who were reluctant to create space for community perspectives in the planning process. However, this did not preclude individuals and groups from 'taking' control by usurping the process with informal active resistance. The HCC circumvented the public consultation program in favour of tactics such as political activism and media advocacy to gain power. This research provides an approach that applies a framework for power as

a way to understand the role of contextual aspects in public engagement. Through such knowledge, researchers are better positioned to adapt evaluation tools to determine what constitutes effective public engagement 'on the ground'.

Chapter 3 showed how power played out in the privileging of scientific expertise over lay knowledge in local risk debates. This chapter focused on risk communication as one language involved in place-making. Importantly, this language was contested as different groups employed strategies for risk amplification or attenuation to serve their own interests in the local debate. These strategies were spatially fixed, operating through place attachments embedded in the multifaceted experiences of people's everyday lives. The dialogue between authorities and the public was about more than just land use; rather, it pervaded all aspects of risks to life, home, prosperity, and community. The case study adds to the understanding of culture in the Social Amplification of Risk Framework (Pidgeon, Kasperson, and Slovic, 2003). The research shows how culture acts through locally situated politics that centre on risk perceptions within the discourse of place-making.

Finally, Chapter 4 revealed the role of power to effect economic change and assert one view of place over others. This chapter showed that the setting for place-making counts as an important factor in making up the substantive basis for the local politics of risk. The AIH represents just the latest iteration in a long process of economic restructuring that has taken place in the region over the past 150 years. As a rural-urban interface, the AIH is one example of how global forces play out at the local level to influence the cultural sphere of local communities. The research contributes to our knowledge of economic restructuring and rural change by providing 'voice' to local impacts of globalization at the rural-urban interface.

### 5.1.2 Practical Contributions

This thesis is based on a research project funded in part through the Canadian Agricultural Rural Communities Initiative of Agriculture and Agri-food Canada (see Appendix H). As part of the requirements for funding, the project has ensured that local stakeholders will directly benefit from the research. Specific measures to disseminate the research findings to the community include: (1) a community advisory committee that provided advice on the project, and who received project final reports; (2) a project website that contains summary information of the project; and (3) ongoing communication with research participants. The last item turned out to be the most effective means to ensure that the project had tangible benefits to the community. Through the follow-up and group interviews, participants from multiple backgrounds (residents, industry, and government) repeatedly expressed appreciation for the project and emphasized how their own involvement in the research process positively influenced the way they thought about the AIH. Their increased understanding of the breadth of perspectives allowed them to be more reflexive about their own positions within the local debates around land use, risk, and industrial development. As a last step in research dissemination, a bound copy of the dissertation will be donated to the public library in Fort Saskatchewan.

## 5.2 Study Limitations

There were four main limitations associated with this study. First, the idiographic nature of research that focuses on a single case precludes generalization of findings. Instead, such research strives to contextualize theory, to make it more sensitive to the local contours of social life. For example, while Chapter 3 claims to improve our understanding of the Social Amplification of Risk Framework, we do not expect that the basis of culture in risk amplification will unfold in precisely the same way in other contexts. Instead, we hope to make theory more contextually applicable in the interest of better understanding local phenomena.

Second, the retrospective nature of the methods limited access to the experiences of the public consultation program as it unfolded between 1999 and 2001. Instead, study participants were asked to reflect upon past experiences, which may have been influenced by events occurring after the AIH was formally approved. One example of this influence was the cavern fire of August 2001, which occurred at precisely the same time as the final area structure plan was approved in Fort Saskatchewan and approximately one year before data collection commenced. The aftermath of the fire emerged repeatedly in the data relating to participants' risk perceptions about the AIH, leading to an over-representation of risk amplification than may have occurred in the absence of the fire.

Third, the research process itself was subject to criticism by members of the community advisory committee. As part of efforts to disseminate research results, the committee had the opportunity to review and reflect on the CARCI final research report. On the one hand, one member of the committee criticized the report for not adequately representing the views of the community. This member believed that the report undermined the efforts of the community by not legitimizing many of the claims they were making against the AIH. On the other hand, another member of the committee criticized the report for being 'one-sided' toward the viewpoints of a small minority of community agitators and did not accurately acknowledge the perspectives of what he/she believed to be the interests of the wider population. While these two perspectives directly contradict each other, they nonetheless point to the possibility that some stakeholders in the community will not hold the study results in high regard, regardless of the report's contents. In effect, this was a no-win situation. However, the fact that such differences in opinion persist only reinforces the wide polarization that continues to drive apart authorities and community members. An indirect benefit of the study was that it created opportunities for disparate viewpoints to be discussed in a collegial environment apart from the political debate that continues in the study area.

Fourth, this thesis does not fully account for the dialectic between the local and global dimensions of place-making. A global sense of place means that places have agency in global social relations. Importantly, certain places are more 'in charge' of the flows and interconnections of globalization than others (Massey, 1997; 2004). The AIH represents one place on the 'receiving end' of globalization with its future development dictated by the global demand for oil and gas. In other words, place was depicted as a

passive setting for the imposition of global forces rather than an active agent capable of asserting its 'place' through the web of social relations at the global scale.

## 5.3 Future Directions

The study limitations described above lead directly into opportunities for future research, both in projects within the AIH itself, and research that further expands on the local context of place-making in environmental controversies.

First, the idiographic focus of this study can be expanded through comparisons of this research to other case studies of environmental controversies. The AIH represents just one example of a locally situated political struggle over place-making. The in-depth knowledge gained through this study adds one new linkage to the overall corpus of research within the global network of social relations that together constitute 'glocalization' (Beck, 1992).

Second, a more longitudinal approach that incorporates observational methods would provide a better means to illuminate the process of change in the community. Understanding social relations is best achieved by examining interactions as they occur, rather than retrospectively. The AIH remains the site of an active social struggle between industry and authorities who continue in their efforts to develop the region as an eco-industrial park, and residents who are using every available opportunity to have their views listened to by local policy-makers. Future work in the AIH is still possible as further consultations and public hearings are set to occur around industrial development and community sustainability. A longitudinal approach would also enable more participatory methods to be employed in the research process. While the community advisory committee in this project served as a local 'sounding board' as the research progressed, the research agenda remained under the control of the researcher throughout the process. A more active role of the community would better enable local stakeholders to directly benefit from the fruits of research. Of course, the risk here is that participatory methods may open the door to more substantial accusations of bias, depending on who is involved in, or more importantly left out of, the research process.

Third, future research can examine in more detail the role of scale in local environmental controversies. In many locality studies, the scale of inquiry of environmental controversies occurs at the community or neighbourhood level as the sphere of political activism (Martin, 2003). This activism occurs beneath a more meso-scale local political agenda controlled by an urban elite whose civic boosterism prioritizes the 'business climate' over the situated experiences of individual citizens or communities (Martin, 2003). This study alluded to the disjuncture between these two scales, where residents mobilized out of concern for a 'place called home' and authorities were more concerned about 'places of progress'. The role of residential versus work-related place-making may be better understood through research that explicitly problematizes the contradictions between these two scales (McDowell, 1997).

Fourth, there is opportunity in the case of the AIH for future research on the local agency of place in globalization. As the region continues to expand as a North American hub for petrochemical production, it will increasingly be in control of the flows of goods and capital in the interconnection between resources in the rural hinterland of northern Alberta, and U.S. markets to the south. As such, the AIH will become a place that is in control of the social, economic, and cultural destinies of other parts of the world. This type of research would lead to a better understanding of the local-global dialectic of place-making. Future research should include perspectives from provincial, national, and international scales to balance the spatial dialectic between the local and global.

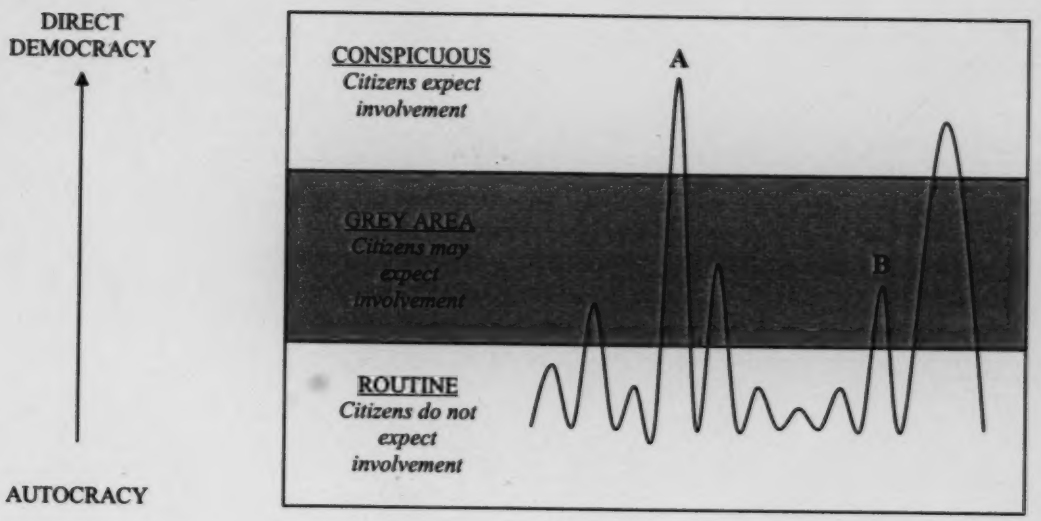


**Fig. 5.1. The grey area of public engagement in local governance.**

## 5.4 References


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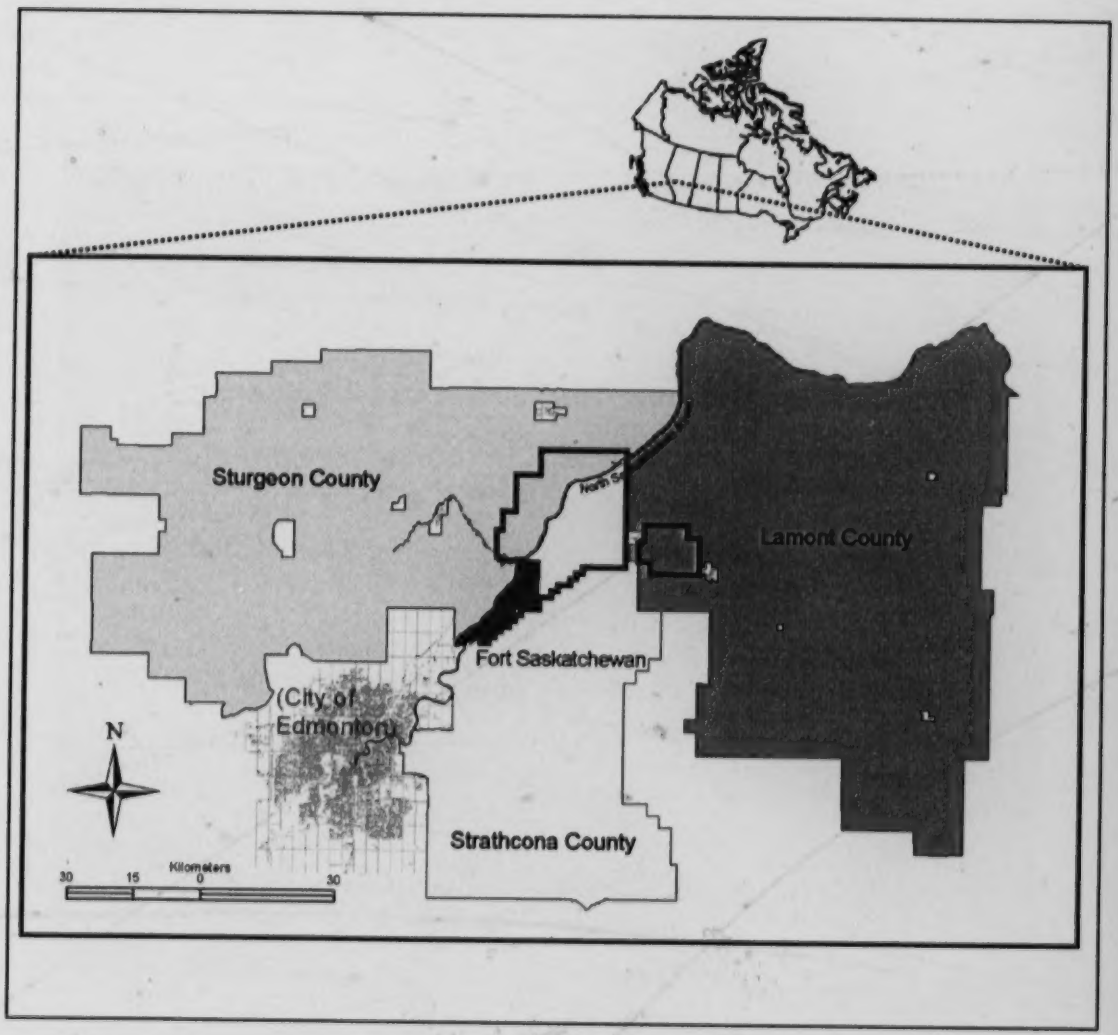
# APPENDIX A

## MAP OF THE STUDY AREA




The dark line demarcates the proposed AIH boundary, located approximately 35 km north east of Edmonton, Alberta, Canada. It encompasses an area of over 190 $km^2$.

# APPENDIX B

## INTERVIEW RESPONDENTS

| Round One Interview (n=33) | Round Two Interview (n=14) | Group Interview (n=7) | Pseudonym | Sex | Age | Occupation | Length of Residence |
|---|---|---|---|---|---|---|---|
| **Resident sample** | | | | | | | |
| S001[ii, a] | • | • | Richard | M | 42 | Farmer | 10+ |
| R002[ii, b] | • | | Soren | M | 37 | Farmer | 5 – 10 |
| S003 | | | Fred | M | 67 | Retired subdivision resident | 10+ |
| R004[ii] | • | • | Greg | M | 50 | Farmer | 50 |
| R004b[i,ii] | • | | Jackie | F | - | Homemaker | - |
| R005ii | • | • | Gerry | M | 58 | Farmer | 10+ |
| R005b[i,ii] | | • | Beth | F | - | Farmer | 10+ |
| R006[ii] | | | Nick | M | 82 | Retired farmer | 78 |
| S007[ii] | | | Joseph | M | - | Non-resident landowner | - |
| R008[ii] | | | George | M | - | Farmer | - |
| R008b[i,ii] | | | Berniece | F | | Farmer | - |
| R009[ii] | | | Karl | M | - | Farmer | - |
| R010 | | | Sam | M | 61 | Trades/Farmer | 45 |
| S011 | • | | Leah | F | 47 | Homemaker, acreage owner | 15 |
| S012 | • | • | Chuck | M | - | Farmer | - |
| R013 | | | Corinna | F | 53 | Non-resident landowner | 53 |
| R015[ii] | | | Carol | F | 69 | Farmer | 69 |
| S016[ii] | • | | Erik | M | 74 | Retired acreage owner | 43 |
| S017 | • | | Janet | F | 61 | Retired acreage owner | 6 |
| S018 | | | Michael | M | 55 | Business owner | 45 |
| S029 | • | | Rachel | F | 45 | Subdivision resident | 18 |
| **Non-resident sample** | | | | | | | |
| S014 | | | Kevin | M | 44 | Newspaper representative | 34 |
| S019 | • | | Dana | F | 42 | Municipal civil servant | N/A |
| S020 | | | Cory | M | 24 | Elected Official | N/A |
| S021 | | | Darryl | M | 57 | Municipal civil servant | N/A |
| S022 | • | | Brenda | F | 55 | Municipal civil servant | N/A |
| S023 | | | Gus | M | 61 | Elected Official | 61 |
| S024 | • | | Elmer | M | 59 | Elected Official | N/A |
| S025 | | • | Brent | M | 67 | Elected Official | 67 |
| S026 | | | Ben | M | 61 | Elected Official | N/A |
| S027 | • | | Jeremy | M | 43 | Industry representative | N/A |
| S028 | • | • | Bob | M | 49 | Industrial planner | N/A |
| S030 | | | Wilma | F | 45 | Municipal civil servant | N/A |

[i] husband and wife interviews – complete demographic information was not collected for the second respondent
[ii] respondents recruited via random selection from land ownership maps
a 'S' denotes snowball sample
b 'R' denotes random sample

# APPENDIX C

## INFORMATION SHEET

**Understanding Industrial Development in Alberta's Rural Communities**

Principal Investigator: Jeff Masuda, PhD Candidate
Department of Earth and Atmospheric Sciences

Sponsors: Dr. Theresa Garvin's Social Science and Humanities Research Council Standard Grant (entitled 'Making Sense of Sour Gas'), Community, Health and Environment (CHE) Research Centre, University of Alberta

Thank you for your interest in the project entitled **Understanding Industrial Development in Alberta's Rural Communities**. This study seeks to understand how disputes over land use relating to the oil and gas and petrochemical industries are dealt with by various groups in Alberta communities. Specifically, this project will recount the experiences of individuals who have been involved in, or opposed to, planning around development in the petrochemical industry. These experiences will be useful in generating a greater understanding of how the risks associated with proposed development are interpreted differently by various stakeholders such as landowners, planners, industry, government regulators, and the general public. Your perspective will be useful to help people who are involved in development and land use issues to resolve current and future conflicts that may arise from different viewpoints. Although this study involves developing important relationships with various stakeholders, it has no ties to industry, community or government partners and will be conducted by an independent team of researchers from the University of Alberta.

You have been asked to take part in at least one of a series of three interviews. A series of questions will be asked through the course of our discussion, but it is anticipated that the bulk of the conversation will centre around discussions of industrial development, concerns about safety, health, and quality of life, and the impact of the changes in land use on the community. The individual interviews will take approximately one hour of your time, and the group interview may take between two and three hours. The interviews will be tape recorded and later transcribed. Your interview will be transcribed using a pseudonym to replace your name. This pseudonym will be used to identify what you said in quotes used in future publications. Throughout the duration of the study all interview tapes will be locked in a secure location at the university and will be destroyed following the completion of the study.

Your participation in the study is voluntary and you are welcome to leave the interview at any time as well as decline to answer questions during the course of the interview. Following each interview, you will have the option of checking the transcript of the tape-recording as well as commenting on the key findings that emerged out of our discussion. For participants representing community agencies, this step is a requirement of your participation in the study (a copy of transcripts will be mailed to you, and your quotations will only be used once your review is returned to us). If the information is used for another study, the researchers will first request permission from you. The findings from this study may be published in academic journals, on the website for the Community, Health, and Environment (CHE) Research Centre at the University of Alberta, or presented at conferences. However, we ensure that your confidentiality will be preserved in all cases.

Thank you for your interest and participation in this study. Through your participation and cooperation we can help develop a deeper understanding of what is becoming a serious issue for many Albertans. If you have any questions about this study, please contact the principal investigator: Jeff Masuda
or Dr. Theresa Garvin .

# APPENDIX D

## INFORMED CONSENT FORM

**Part 1:**

**Title of Project:** Understanding Industrial Development in Alberta's Rural Communities


Principal Investigator(s): Jeff Masuda
Community, Health, and Environment Research Centre
Department of Earth and Atmospheric Sciences
University of Alberta

Co-Investigator(s): Theresa Garvin
Community, Health, and Environment Research Centre
Department of Earth and Atmospheric Sciences
University of Alberta


**Part 2 (to be completed by the research subject):**

| | | |
|---|---|---|
| Do you understand that you have been asked to be in a research study? | Yes | No |
| Have you read and received a copy of the attached Information Sheet? | Yes | No |
| Do you understand the benefits and risks involved in taking part in this research study? | Yes | No |
| Have you had an opportunity to ask questions and discuss this study? | Yes | No |
| Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason. | Yes | No |
| Has the issue of confidentiality been explained to you? Do you understand who will have access to your records? | Yes | No |
| Do you understand that your interview will be tape-recorded for the purposes of transcribing, and that the tapes will be kept secure and destroyed at end of the study? | Yes | No |

## DECLARATION

I agree that I have read and understand the above information. I agree to participate in the survey about the development of the Alberta's Industrial Heartland conducted by the Community, Health and Environment Research Centre at the University of Alberta on behalf of Jeff Masuda and Dr. Theresa Garvin. I understand that the information given by me will be kept in strictest confidence by the researchers and that the tape recording of my interview will be kept secure and destroyed at the end of the study.

| | | | |
|---|---|---|---|
| Interview 1 | _____ | _____ | _____ |
| | **(Print Name)** | **(Date)** | **(Signature)** |
| Interview 2 | _____ | _____ | _____ |
| | **(Print Name)** | **(Date)** | **(Signature)** |
| Group Interview | _____ | _____ | _____ |
| | **(Print Name)** | **(Date)** | **(Signature)** |

(Participant retains one copy of signed informed consent form)

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

_____ _____

Signature of Investigator or Designee Date

_____

Printed Name

# APPENDIX E

## INTERVIEW GUIDE (FIRST INTERVIEWS)

### I. Preliminary Materials

As interview begins:

1) distribute info sheet and consent form for interviewee to sign
2) collect signed consent form before meeting begins
3) set up and test the tape recorder and microphone

**To start the interview:**
*I would like to begin by first thanking you for agreeing to participate in this interview. I realize that your participation is voluntary and has involved you going out of your way during this busy time of year.*

*There are some practicalities to take care of before we begin our discussion. First, I want to check that you have read and signed the informed consent form….***(if not, distribute and collect).** *Are there any questions?*

*At this point I would like to remind you that I will be taping this interview. This is necessary because over the course of an interview the discussion can become quite broad. Taping the discussion allows me the opportunity to focus all my attention on what you are saying rather than just taking notes. I want to reassure you that only Dr. Garvin and myself will know your identity and that, unless you prefer that I use your real name, a pseudonym will be given when we transcribe the interview.*

*During the next hour, I will be asking a series of questions. These will function as guidelines for our discussion. Please do not feel you are limited to responding solely to the questions I raise. You are welcome at any point during the interview to bring up for discussion any issues you feel are relevant or important to you.*

*I want to remind you that we are not here to find 'right' or 'wrong' answers. The issues associated with the development and processing of Alberta's energy resources are complex and I am interested in recording an array of perspectives and opinions. At no point will I judge you for what you say. My main purpose here is to find out what you felt during the development process, and what you think now.*

*Do you have any questions before we get started?*

## II. Interview ("Setting the Context")

**Part A (PLACE):** *I would like to begin by having you tell me a little bit about yourself and how you see your place in this community.*

1. *Tell me a little about yourself.*
2. *What has it been like to live in this area?*
3. *What do you value most about living in this area?*
4. *What do you think attracts other people to this area?*

    a. *Quality of life/Culture*
    b. *Environment*
    c. *Recreation*
    d. *Economy*
    e. *Friends/Family/Community*

**Part B (INDUSTRY-COMMUNITY):** *I would like to talk more about how you think industry and the community co-exist?*

1. *How would you describe the relationship between industry and the community?*

    a. *Has it always been this way?*
    b. *What reasons?*

2. *Why do you think this particular area/community is or is not ideally suited for this type of industry?*

    a. *Environment*
    b. *Economy*
    c. *Population*
    d. *Geography*

3. *What does the future hold for industry in this area/community?*

**Part C (ROLE IN DEVELOPMENT):** *Now I would like to talk about how you have been involved in the* **(development issue).**

1. *When did you first hear of or become involved in the planning process?*
2. *What role did you play in the planning process leading to* **(development issue)***?*

    a. *Out of the loop*
    b. *Observer*

c. *Spoke at meetings*
d. *Active in community mobilization*

*How did you express your concerns?*
*How did you feel about your role?*
*What did you do?*

3. *What aspects of your role were difficult for you?*

   a. *Time*
   b. *Barriers/Bureaucracy*
   c. *Money*
   d. *Other resources*

**Part D (CONFLICT):** *I would like to talk more about your perspective on the conflict that has arisen out of the planning process.*

1. *First of all, what do you think of the disputes that have occurred at meetings and in the media about* **(development issue)***?*

   a. *Do the arguments make sense?*
   b. *With whom do you side* **(If not clearly indicated)***?*

2. *How have you dealt with people who have expressed opinions or concerns that are different than your own?*

   a. *Any hostility?*
   b. *Mainly amicable?*

3. *How do you feel about* **(Place)** *now that this* **(development issue)** *has occurred?*

   a. *Displacement*
   b. *Better off/Worse off*
   c. *Want to stay but cannot*
   d. *Want to move but cannot*

**Part E:** *This brings us to the end of my set of prepared questions.*

- *Is there anything that you feel we have missed and should talk about?*
- *Is their anything you would like to add to the conversation we have had thus far?*

*I would like to end the interview by thanking you for sharing your stories and insights with me. This has been an extremely informative conversation and it will be very helpful to me as I analyze this issue.*

**Transcript Verification and Member Checking**

Public Participants

*As was stated in the information sheet, you have the option of reviewing and commenting on the transcripts and key findings coming from our discussion. I would like to re-emphasize that like everything that has been shared in the interview, these comments will remain confidential. Are you interested in checking the transcripts and providing feedback?*

___Yes. I will be contacting you in the future with more information.
___No. I understand, that's fine.

**Agency Representatives**

*As was stated in the information sheet, I will be sending you transcripts and key findings coming from our discussion. I would like to re-emphasize that like everything that has been shared in the interview, these comments will remain confidential. However, because of the possibility that certain aspects of your comments may be attributable to you in reports coming from the study, we want to ensure that you sign off on your transcripts. We will be mailing these documents to you, and will only use material that is attributable to you once we receive your feedback. What is the best way to get these documents to you?*

Email: _____

Mailing Address: _____

**Phases 2 and 3 Confirmation**

*In our next interview I will be looking more in-depth at some of the issues that came about from what we've talked about today. I'll be returning to the community in a few months to give participants a chance to reflect on some of the early results. Are you still interested in participating in subsequent interviews?*

___Yes. I will be contacting you in the future with more information.
___No. I understand, that's fine.

*Thank you again for participating in this interview. If you have any questions regarding this study, or questions regarding some of the issues we discussed, please do not hesitate to call me at the numbers contained in your information letter.*

## APPENDIX F

## RESEARCH SUMMARY FOR FOLLOW-UP INTERVIEWS

### PART 1: WHAT WE HAVE LEARNED

In the first round of interviews, we talked to 30 people. This included:

- 12 farmers/absentee landowners
- 7 country residents (acreages and rural subdivisions);
- 8 politicians and administrators from the four municipalities (Sturgeon, Strathcona, Fort Saskatchewan, Lamont);
- 3 representatives from industry, planning associations, and the media.

We chose 10 of the landowners randomly, and the rest by asking each person we interviewed "who else is important to talk to". The purpose of the first interviews was to give everyone an opportunity to tell us about their experiences during the development of Alberta's Industrial Heartland. We highlight the important points in this summary.

Overall, participants' responses were very constructive. People had mixed things to say about their experiences with the Heartland. It was very clear that people wanted to ensure that all aspects of the issues are adequately portrayed. Even though most of the events that concerned the public took place between 1998 and 2001, people talked about the bigger picture, providing stories and insights that go further back in history. We also found that the issues are still important to everyone, even two years after Heartland came into being.

As you may recall, we talked about four main aspects of your experiences with the Heartland. The array of responses from all participants is recorded below.

1. **Your Place in the Community**

- Most landowners, including both farmers and country residents are long-time residents of the Heartland area (e.g. 10 – 80 years), many of whom can trace their heritage back to the early homesteaders
- People value the proximity to Edmonton and Fort Saskatchewan because of services and social opportunities
- Farmers place a high value on the quality of agriculture in this region
- Acreage owners and subdivision residents are attracted to the rural quality of life
- People agree that there are many changes taking place in local community. Over time there has been a decline in the numbers of people in farming (as farms grow bigger) and more country residents moving into the Heartland

- Some landowners are optimistic about the opportunities that more industry will bring to them (e.g. land values, local economy)
- Local government and most residents are generally hopeful that the community will benefit from the Heartland in economic terms, including the tax and employment benefits from industry
- Many landowners are worried about their future now that the Heartland is in place and are uncertain whether it would be better to stay or leave

**2. Community-Industry Relationship**

- Most participants think that the relationship between their community and industry is positive and understand the importance of industry to the local economy
- All groups realize the contribution that industry makes to the community in terms of its role in the local economy and its support to charitable groups. Some, however, feel that industry is often given too much credit
- Many are concerned about the potential impacts of more industry and express fear and anxiety at the potential risks involved
- Concerns that are expressed include pollution, traffic, noise, safe distances, and loss of agricultural land. Many landowners think there should be a limit on further industrial growth in the area

**3. Role in Development**

- Almost all participants have heard of the Heartland, and most have attended at least one public meeting. However, few understood the details of the area structuring plans, including the factors that led to their development and the potential implications of the plans for future land use
- Planners felt that they needed to provide better information about the Heartland so that people could make more informed decisions
- People think public involvement is important to ensure that development plans will protect their interests
- Some people who attended meetings or followed the issues closely were frustrated that the public involvement didn't really change anything
- Some felt that people who opposed the Heartland were a "small minority" and that the majority of landowners in the Heartland were in favour of the plans
- Those who became more involved in public consultations expressed discouragement and felt fatigued by continuing demands on their time

**4. Opinions about Conflict**

- Some Heartland residents feel that the local government (which is based in urban areas) do not understand and are not receptive to rural lifestyles and experiences
- There is considerable mistrust among Heartland residents towards their local government. People feel that officials need to be more forthcoming with information

- Participants believe that much of the resentment among those who became involved came from a perceived lack of notification about public meetings. This was especially true for those who lived outside but adjacent to the Heartland boundaries
- Organizers of public involvement found it difficult to get the public interested in participating, and that meetings were undermined by special interests that had little to do with the Heartland
- Most participants, when asked to think about the future of the Heartland believe that more conflict is inevitable

## PART 2: NOW WHAT?

We are now going to talk again with several of the original people to follow up on some of the important messages we heard that relate to your experiences with the Heartland. We are selecting 10 landowners and 10 officials/planners to ensure that we have a cross-representation of participants.

Now that you have had some time to think about some of the things brought up in our first interview, we want to come back to talk further, based on what we have heard from others.

The purpose of these follow-up interviews is to hear what you have to say in response to some of the key themes that have come out of our analysis. This includes:

- People's attitudes toward each other
- How the Heartland is changing things in your area (your life, the landscape, the community)
- Risks and benefits that will come with the Heartland
- Successes and challenges of public participation

Soon after we complete these follow-ups, we will hold one or two group interviews with these people to share and discuss our findings. In these meetings, we will also talk about the implications of the research and how our results may be useful to you and the communities that have participated in the project.

# APPENDIX G

## FOLLOW-UP INTERVIEW GUIDE

### I. Preliminary Materials

As interview begins:

1) distribute info sheet and consent form for interviewee to sign
2) collect signed consent form before meeting begins
3) set up and test the tape recorder and microphone

**To start the interview:**
*I would like to begin by first thanking you for agreeing to continue your participation in this project. I realize that your participation is voluntary and has involved you going out of your way during this busy time of year.*

*There are some practicalities to take care of before we begin our discussion. First, I want to remind you about the informed consent form which you signed in our last interview and that our agreement to anonymity is still in place....***(if not, distribute and collect).** *Are there any questions?*

*At this point I would like to remind you that I will be taping this interview. This is necessary because over the course of an interview the discussion can become quite broad. Taping the discussion allows me the opportunity to focus all my attention on what you are saying rather than just taking notes. I want to reassure you that only Dr. Garvin and myself will know your identity and that a pseudonym will be given when we transcribe the interview.*

*During the next hour, I will be asking a series of questions. You have received the summary of the first round of interviews, and hopefully have had time to reflect on these results in conjunction with our conversation earlier this year. Now I want to come back to some of the important themes that have emerged, and return to some of your ideas about the Heartland in the light of what others have said.*

*The questions I will ask function as guidelines for our discussion. Please do not feel you are limited to responding solely to the questions I raise. You are welcome at any point during the interview to bring up for discussion any issues you feel are relevant or important to you.*

*I want to remind you that we are not here to find 'right' or 'wrong' answers. The issues associated with the development of Alberta's energy resources are complex and I am interested in recording an array of perspectives and opinions. At no point will I judge you for what you say. My main purpose here is to find out what you felt during the development process, and what you think now.*

*Do you have any questions before we get started?*

**II. Interview ("Implications of Development")**

**Part A (RESPONSE TO SUMMARY):** *I would like to begin by talking to you about some of the things that I have found so far in my interviews from the first phase of the study. Did you have a chance to read through the summary?*

1. *First of all, what did you think of the summary?*
    a. *What you expected, why or why not?*
    b. *What parts do you agree/disagree with? Why?*
        i. *Your place in the community*
        ii. *Perspectives on industry in the community*
        iii. *Perspectives on future development*
        iv. *Perspectives on conflict*
2. *What aspects about your experiences or the experiences of others related to this issue were missing from the summary?*

**Part B (PLACE):** *I have heard a lot of ideas from different people about how the Heartland is going to change things in this area, some for the better, some for the worse. I would like to talk more about the ways that Heartland is impacting or is going to impact (your life and the life of your family/ the lives of people that live here).*

1. *What sorts of changes do you think Heartland will impact you and your home (positive/negative)/the people that live in and around the Heartland?*
    a. *Safety/Health*
    b. *Physical/Environment*
    c. *Social/Community*
    d. *Economic/Political*
2. *In what sorts of ways has the Heartland created/changed/affected relationships?*
    a. *Within the community*
    b. *Between community and local government*
    c. *Other*
3. *Based on your involvement/observations, how has the Heartland affected you personally?*
    a. *Changes in outlook on life?*

b. *Ways you think about others/government/community/public*
c. *How you approach others?*
d. *Lessons learned?*
e. *Trust?*
f. *Displacement?*

**Part C (RISKS AND BENEFITS):** *I have heard about several ideas that people have concerning the risks and benefits of existing industry in the Heartland. With the Heartland, there is an expectation that more industry will come to this area, and with it several new risks and benefits. I would like to talk more about your views on the risks and benefits that future industry will have in this area.*

1. *What do you think some of the benefits are of having more industry in the Heartland?*

   a. *Employment*
   b. *Land value*
   c. *Royalties*
   d. *Community economy*

2. *What do you think some of the risks are of having more industry in the Heartland?*

   a. *Who is responsible?*
   b. *What happens if hazards are not dealt with?*

3. *How do you think you personally will be affected by industry?*

   a. *Safety/Health*
   b. *Environment*
   c. *Community*
   d. *Economic*

**Part D (PARTICIPATION):** *With regard to the public involvement aspects of the Heartland (e.g. open houses, public hearings, other consultations), I have heard people talk about successes and failures.*

1. *When you heard about the public involvement process, including the open houses and public meetings, what did you expect would happen?/ When you designed the public involvement process, what did you expect the outcomes to be? What did you expect from the community? What do you think the community expected?*

   a. *Outcomes*
   b. *Meaningful participation*

2. *Some people said there were successes – what do you think they were?*

   a. *Trust*
   b. *Power*
   c. *Communication*
   d. *Process*

3. *Some people said there were failures – what do you think they were?*

   a. *Trust*
   b. *Power*
   c. *Communication*
   d. *Process*

4. *What steps can local officials, the community, other stakeholders do to improve the ways that the public participates in the Heartland?*

   a. *Trust*
   b. *Power*
   c. *Communication*
   d. *Process*

**Part E:** *This brings us to the end of my set of prepared questions.*

- *Is there anything that you feel we have missed and should talk about?*
- *Is their anything you would like to add to the conversation we have had thus far?*

*I would like to end the interview by thanking you for sharing your stories and insights with me. This has been an extremely informative conversation and it will be very helpful to me as I analyze this issue.*

**Transcript Verification and Member Checking**

Public Participants

*As was stated in the information sheet, you have the option of reviewing and commenting on the transcripts and key findings coming from our discussion. I would like to re-emphasize that like everything that has been shared in the interview, these comments will remain confidential. Are you interested in checking the transcripts and providing feedback?*

___Yes. I will be contacting you in the future with more information.
___No. I understand, that's fine.

**Agency Representatives**

*As was stated in the information sheet, I will be sending you transcripts and key findings coming from our discussion. I would like to re-emphasize that like everything that has been shared in the interview, these comments will remain confidential. However, because of the possibility that certain aspects of your comments may be attributable to you in reports coming from the study, we want to ensure that you sign off on your transcripts. We will be mailing these documents to you, and will only use material that is attributable to you once we receive your feedback. Is your mailing address still the same?*

**Phases 3 Recruitment Verification**

*I mentioned at the end of our last interview that I would be conducting a group interview as the final phase of this project. The purpose of the group interview will be to give participants who represent a variety of viewpoints to discuss the issue of development as a whole and to speak with participants of the other community I have studied to see how their experiences may be similar or different, and why. Due to the nature of the group interview, continued confidentiality and anonymity cannot be ensured, as there will be other people from the community in the room. However, I will explicitly ask each person that everyone respect other people's requests for anonymity. Would you be interested in attending this group interview?*

___Yes. We will be contacting you in the future with more information.
___No. I understand, that's fine.

*Thank you again for participating in this interview. If you have any questions regarding this study, or questions regarding some of the issues we discussed, please do not hesitate to call me at* **(phone number and/or email)** *or my supervisor at* **(phone number and/or email address)**.

[END]

## APPENDIX H

### GROUP INTERVIEW GUIDE

Dear ----,

Thank you for agreeing to participate in this last phase of our project. Your continuing involvement will be extremely helpful in developing an understanding of the issues associated with industrial development in the Heartland and Alberta. Just to confirm, the meeting will be at 7 p.m. in Room 9 at the Fort Saskatchewan Library. Please arrive 15 minutes early as there are some administrative details to cover prior to the meeting.

There will be several participants at this meeting, including landowners from the Heartland area, as well as representatives from local governments and industry. The purpose of this meeting will be to allow us to reflect on your experiences in the Heartland, including your thoughts on what has happened in the past, and looking to the future.

The reasons that researchers do focus groups is to allow people to interact with each other, responding to viewpoints that are similar or different to their own. Usually, such discussions are dynamic, interesting and energetic. They often allow people to reflect on their own opinions and presumptions in new ways. Such interaction will help us to confirm or to critique some of the findings that we have compiled from the project so far. There will be multiple perspectives taking part at this meeting, and all opinions will be valued. In the end, this will allow us to report our results more confidently, and provide the community with better recommendations for future planning.

To start out the discussion, I will be asking each of you to introduce yourselves to each other. From there, our discussion will move on to talk about how your community plans to deal with the continuing changes that are taking place as a result of the Heartland. We will talk about such things as the changing landscape of the Heartland, people's attitudes and relationships, public participation, and future expectations. I am confident that we will have a positive and constructive dialogue, and look forward to your input!

If you have any questions, please do not hesitate to contact me at **966-0966**.

Best regards,

Jeff

## III. Preliminary Materials

As interview begins:

1) distribute info sheet and consent form for interviewee to sign
2) collect signed consent form before meeting begins
3) set up and test the tape recorder and microphone

**To start the interview:**
*I would like to begin by first thanking you all for agreeing to continue your participation in this project. I realize that your participation is voluntary and has involved you going out of your way, now for the third time.*

*There are some practicalities to take care of before we begin our discussion. First, I want to remind you about some changes related to the informed consent form which you signed in our last interview and that our agreement to anonymity is still in place….***(if not, distribute and collect).** *Are there any questions?*

*I also wanted to remind you that we will be taping this interview. Because our discussion will probably be quite broad, and could about to two hours, taping the interview allows us to really listen to what you're saying rather than spend all our time taking notes. I want to reassure you that only the people in this room will know your identities and that pseudonyms – or different names – will be given to you when we transcribe the discussion. So it is not likely that people will be able to identify you from the things said in this room. We also ask that you try to respect everyone else's confidentiality when you leave tonight.*

*During the next couple of hours, I will be asking a series of questions. These will function as guidelines for our discussion. Please do not feel you are limited to responding solely to the questions I raise. You are welcome at any point during the interview to bring up for discussion any issues you feel are relevant or important to you.*

*I want to remind you that we are not here to find 'right' or 'wrong' answers. The issues associated with industrial development in Alberta are complex and I am interested in recording an array of perspectives and opinions. At no point will I judge you for what you say. My main purpose here is to find out what you felt during the development process, and what you think now.*

*Do you have any questions before we get started?*

## IV. Interview

INTRODUCTION

*As I indicated in the email last week, the purpose of this last interview is to allow us to reflect on your attitudes and experiences about the Heartland. Because I have now talked one on one now 44 times with a number of stakeholders in the Heartland, it is important that I confirm my findings by giving you the opportunity to discuss some of the major themes that I have arrived at.*

*So generally speaking then, we are going to be talking about how the community, or communities in the Heartland are dealing with the changes that are currently occurring, and are expected to continue to occur as a result of the recent policy changes in the four municipalities. What I've found from my conversations with you is that these changes are diverse. I have had a lot of feedback on both sides of the issue, but what everyone seems to agree on is that change is inevitable.*

*Of course, one of the critical issues when talking about how to deal with change is the ways in which people relate to each other. This involves how members of the public interact with each other, as well as the roles of governments and industry. After hearing about your experiences with past public involvement, I think we can agree that there is a lot of room for improvement. So hopefully we can talk about some concrete recommendations to promote positive relationships in future deliberations that are expected to occur in the Heartland.*

*So let's just begin by getting to know one another with some introductions. I would like to start out by allowing each of you to give a brief summary about yourself, so let's get on with that.*

*Starting on my left, _____ could you tell us about yourself, your life in the Heartland, and what things are important to you?*

*And what experiences or involvement have you had with the Heartland?*

*How do you see your/this community changing as a result of the Heartland?*

## 1. CHANGE

*I've heard some interesting ideas about how the Heartland is changing things, including physical changes to the region (roads, etc.), as well as social changes ( people's lives, etc.)*

### 1a. What is the Heartland

*One of the things I've discovered is that when we talk about change, we have to also look at the big picture – what people have told me is that the Heartland has been a region undergoing a lot of changes for quite some time, and that it's an evolving landscape.*

What do you think that the Heartland IS right now as a physical and social landscape?

Probe: Agriculture, country living, industrial landscape
Way of life
History
Productive
Industry

***What SHOULD the Heartland become in the future?***

Probe: Status quo
More industry
Depopulation
Respect diversity

### 1b. Opportunity versus Displacement

*Many of the participants that I've talked to have expressed their opinions about how changes is going to affect them in the future. The sentiment I've heard is that people are very attached to their homes, but feel that they have no choice but move because of encroaching industry. Others are more welcoming of industry, citing potential opportunities to sell their land to industry at higher rates.*

***How is the Heartland affecting the people that live in it?***

Probe: Opportunities
Displaced
Stigma
Sell-out
Guilt over selling

***Can anything be done about those who feel that they are being negatively affected by the Heartland?***

Probe: Social activism
Policy changes

**1c. Rural Restructuring**

*I've come to understand that a lot of the changes taking place in the Heartland are due to rural restructuring. That is, a shift in farming practices toward bigger farm businesses, a decline in the agricultural community. I've heard that subdividing land for acreages, leasing to sod farms, and selling to industry are ways in which farmers are seeing the future of their properties, when they retire. With these types of changes come new people and new interests in the region.*

***How do these changes affect the community?***

Probe: Fragmented community
Voice

**2. RISKS AND BENEFITS**

*It seems to me that the potential benefits of the Heartland are fairly well known. Most people I've talked to have spoken about economic benefits that industry brings to the region.*

***What are these benefits, and how real are they to the people in this room?***

Probe: Personal benefits – employment, services, taxes
Local benefits – economic, infrastructure
Societal benefits

***What are the risks that people will face as the Heartland comes to fruition?***

Probe: Economic
Health
Who's responsible?
What is acceptable? Are the benefits worth the risks?

**3. TRUST**

*Perhaps one of the most striking findings to me from the project is the climate of mistrust that exists among all of the parties that I've spoken to. There is mistrust toward government, toward industry, but also mistrust among different groups of the public, and mistrust OF the public by government officials.*

***What are some reasons for this climate of mistrust?***

Probe: Why don't we trust government?
Why doesn't government trust us?
How can we improve?

**4. POWER**

*I want to talk about a subject that wasn't an explicit topic of the individual interviews, but that seemed to pervade through many of the conversations that I've had. The question of who holds power seems to be an important element of relationships, of who has the ability to make or influence decisions, and ultimately, whose vision of the Heartland gets realized.*

***Who hold power in the Heartland?***

Probe: Government – councillors vs administration, provincial vs municipal
Industry
Public

**5. EXPECTATIONS**

*As a last discussion topic, I would like us to look into the future and imagine a hypothetical scenario. A major petrochemical corporation is interested in putting a processing plant somewhere in the Heartland. Take me through how this would happen, who would be involved, and what you would do.*

***What is going to happen?***

Probe: Public involvement (when, where)
Protest

***How can we avoid conflict?***

Probe: Trust
Listening

***What about participation fatigue?***

**Part D:** *This brings us to the end of my set of prepared questions.*

- *Is there anything that you feel we have missed and should talk about?*
- *Is their anything you would like to add to the conversation we have had thus far?*

*Well, that's the end of my set of prepared questions. Is there anything else that you think we haven't talked about that perhaps we should talk about? Anything that we've missed or that you'd like to add before we wrap up the formal part of the evening?*

*I'd like to close by thanking all of you for coming out tonight and sharing your ideas and insights with us. It's been an enlightening conversation... I've learned a lot about the Heartland over the past two years, and a lot about what you think the development that is taking place here.*

# APPENDIX I

## CARCI INFORMATION

Project # AB/RES/0006

**CARCI website:**

http://www.rural.gc.ca/programs/sunset_e.phtml?content=carci_ps&round=1

**Project website:**

http://research.eas.ualberta.ca/carci

# APPENDIX J

## BIOGRAPHY

To conclude this thesis, it is important to situate myself as a researcher and to reflect on personal motivations, subjectivity, and biases that I carry with me into the research process. At the political level, as a formerly right-leaning-turned-left-leaning Canadian citizen, I find myself increasingly critical of the taken-for-granted economic policies of our nation, and especially the province of Alberta, and the resulting environmental repercussions that stem from those policies. While my interest in environmental change has led me to criticize government policies and industrial practices, I have also become more reflexive as a citizen and consumer. The doctoral program has given me ample theoretical background in environmental sustainability and human agency to criticize the internal contradictions of my own beliefs and practices in relation to the environment. This process has also extended to my view of the participants in the research project. Over the course of data collection, and more so during the analysis, I became increasingly suspicious of the claims being made by not only the proponents of the AIH, but *all* groups contributing to the conflict over land use, risk, and industrial development. In so doing, my allegiances to the naïve notion of a 'victim' and 'offender' shifted substantially, opening my eyes to the realization that cultural preservation and economic progress are not necessarily only about 'right' and 'wrong'. Thanks to the careful guidance of my supervisor, I worked to try to bracket out my own perspective to see how local politics surrounding the AIH were just that – political activism in the interest of personal interest. Whether those interests were in self-gain, community gain, or gain for the public at large is secondary to the more important issues pertaining to advancing our understanding of social process.

Academically, the road I have traveled to this point has been a curious one. Beginning with a BSc in Zoology, the first four years of my university education trained me to think like within the scientific method. I was interested in environmental physiology and northern ecology, working within experimental settings using animal models to understand mammalian adaptations to the environment. My distaste for laboratory work and desire to focus on the human dimensions of the environment compelled me to reorient my focus into the social domain, and I soon found myself undertaking an MSc in Health Promotion Studies. My Master's thesis employed quantitative research methods to determine subjective and objective constraints to environmental transportation behaviour. Needless to say, my thirst for knowledge about human-environment interactions required further training within the qualitative realm. It was this realization that brought me to the Human Geography program at the University of Alberta, and ultimately to the creation of this thesis.

Finally, 12 years of part-time military service has engrained within me a somewhat militant tendency to view personal, and more recently social, issues as

straightforward problems in need of solving. It has taken four years of rigourous academic training to realize that the real world of social problems, in this case, local environmental controversies, requires a much more subtle, nuanced approach. Through coursework, readings, involvement in scholarly discussion groups, as well as the close guidance by my supervisor, I feel that I have found a balance between these two aspects of my own lifeworld. This balance is helping me to bracket out the culture of military efficiency from my academic pursuits.